XVIII. A list of the Lepidoptera of the Khasia Hills.
Part I. By Colonel Charles Swinhoe, M.A.,
F.L.S., &c.

#### [Read March 29th, 1893.]

For the past three years I have received monthly consignments of Lepidoptera from the Khasia Hills, captured by the native collectors of the Rev. Walter A. Hamilton, and, as he employs several collectors, this list ought to be fairly complete, and I have thought it worthy of publication, because there seem to have been fewer Lepidoptera recorded from the Khasia Hills than

from almost any other locality in India.

The new species in the Rhopalocera are, as might be expected, but few; in the Heterocera there are very many. I have followed Moore's classification in the Euplæinæ and Satyrinæ, de Nicéville's in the Nymphalinæ and Lycænidæ, and Watson's classification of the Hesperidæ (P. Z. S., 1893, p. 3), to whom I have submitted all my new species of Hesperidæ for examination, being the latest classification recognised by Indian lepidopterists. In the Pierinæ (which are very limited), and the Papilioninæ, I have followed the arrangement in my own museum. In the Heterocera, I have followed Hampson's classification of the Sphinges, Bombyces, Noctues, and Deltoides, and Meyrick's classification of the Geometers and Pyrales, altering the order in which they run to suit the present knowledge of the subject.

## Part I. RHOPALOCERA.

Family NYMPHALIDÆ. Subfamily LIMNAINÆ.

Genus TIRUMALA, Moore.

1. Tirumala limniace (Cram.), Pap. Exot., i., pl. 59, f. d., E (1775).

TRANS. ENT. SOC. LOND. 1893 —PART III. (SEPT).

2. Tirumala septentrionis (Butler), Ent. Mo. Mag., xi., p. 163 (1874).

## Genus Limnas, Hübn.

3. Limnas chrysippus (Linn.), Syst. Nat., p. 471 (1758).

## Genus Salaturia, Moore.

4. Salaturia genutia (Cram.), Pap. Exot., iii., pl. 206, f. c, p (1779).

## Genus Parantica, Moore.

5. Parantica melanoides, Moore, P. Z. S., 1883, p. 247.

## Genus Caduga, Moore.

- 6. Caduga melaneus (Cram.), Pap. Exot., i., pl. 30, f. p (1775).
- 7. Caduga tytia (Gray), Lep. Ins. Nepal, p. 9, pl. 9, f. 2, & (1833).

#### Subfamily EUPLŒINÆ.

## Genus Crastia, Hübn.

8. Crastia core (Cram.), Pap. Exot., iii., pl. 266, f. e, f, & (1780).

## Genus Penoa, Moore.

- 9. Penoa alcathoë (Godart), Enc. Méth., ix., p. 178 (1819).
- 10. Penoa deione (Westwood), Cab. Or. Ent., p. 76, pl. 37, f. 3 (1848).

Common. Some of the examples received have the apical portions of the fore wings streaked with pale lilac-blue, as in the mimetic form of the black female of *Euripus halitherses*, which also appears to be common in the Khasia Hills, and which is a very perfect mimic of *E. deione*.

This form of  $\mathfrak{P}$  *E. halitherses* I have also from Sikkim, but the Sikkim forms of *P. deione*, in so far as I have seen, never have these streaks, a character which is very interesting, and probably ancestral, having lasted in the mimic longer than in the protected insect.

Genus Trepsichrois, Hübn.

11. Trepsichrois linnæi, Moore, P. Z. S., 1883, p. 286, pl. 29, f. 4, \( \chi \); pl. 30, f. 1, \( \delta \).

Genus Danisepa, Moore.

12. Danisepa rhadamanthus (Fabr.), Ent. Syst., iii., p. 42, & (1793).

Genus Pademma, Moore.

13. Pademma klugi (Moore), Cat. Lep. E. I. C., i., p. 130, 3 2 (1857).

Var. angusta, Moore, P. Z. S., 1883, p. 306.

Var. imperialis, Moore, l. c., p. 307.

Var. regalis, Moore, l.c.

- 14. Pademma hamiltoni, var. nov.
- 3. Black. Fore wings shot with brilliant blue throughout; a row of white spots near the outer margin, sometimes complete, and sometimes only four or five in the upper portion of the wing; a row of double smaller spots close to the margin, always complete, the two rows of spots sometimes white, and sometimes tinged with blue. Hind wings black, with two similar rows of single spots, the inner row larger than the outer row, and more or less elongate. Interior portions of both wings without spots. Expanse of wings,  $3\frac{6}{10}$  in.

Many examples received. No doubt only a varietal form of P. klugi, but apparently a constant form with very little variation.

- 15. Pademma crassa (Butler), P. Z. S., 1866, p. 278.
- 16. Pademma uniformis, Moore, P. Z. S., 1883, p. 308.

Genus Isamia, Moore.

17. Isamia splendens, Butler, P. Z. S., 1886, p. 272, &.

Genus Stictoplea, Butler.

18. Stictoplæa binotata, Butler, Journ. Linn. Soc. Lond., Zool., xiv., p. 302 (1878).

Very common. In Trans. Ent. Soc., 1892, p. 247, Mr. L. de Nicéville sinks this species into a synonymn of S. harrisii, Felder, and states that he has

received S. harrisii, S. binotata, S. regina, S. crowleyi, and S. hopei, all from the Khasia Hills, from the Rev. W. A. Hamilton, and makes some uncalled-for remarks about stay-at-home naturalists, because Mr. Moore has (very properly I and many others consider) given names

to these extremely rare forms.

It is the old senseless dispute as to what is a species and what is a variety. When any one describes a new insect he has to give it a name for the sake of convenience; in writing this I quote Mr. de Nicéville's own words in naming a varietal form of the female of Euripus halitherses (see p. 20, vol. ii., Butt. of India). It is impossible to know whether the insect is a new species, or a new variety, or a new local form; the letters n. sp. are used for want of a better term. Let Mr. de Nicéville invent a new term, and no doubt it will be readily adopted.

As the Rev. W. A. Hamilton had been collecting for me for the past two years, I wrote and asked why I had not received from him any of the forms referred to, and in reply he states:—" My collectors sent me about three hundred  $Eupl \omega as$ . I sent them to Mr. de Nicéville to name them for me, and to keep what he wanted; he kept twenty or thirty, and returned the rest to me; they are all  $Eupl \omega a \ binotata$ ; the supply is unlimited."

I think if Mr. de Nicéville had written that out of three hundred S. binotata received by him from the Rev. W. A. Hamilton he got the seven or eight specimens exhibited when his paper was read at the Society's meeting, representing the various extremely rare varietal forms described by Mr. Moore, it would have been fairer.

Amongst the many thousands of butterflies received from the Rev. W. A. Hamilton, the only Stictoplæa I have ever received is E. binotata, and all perfectly typical. E. harrisii I have a series of, all from Burma; and it is undoubtedly a good local form. The other forms referred to must be extremely rare. Though I have collected for nearly twenty years, and have paid over £400 to collectors in India for Lepidoptera sent me during the past three years, I have never seen a single specimen of any of the forms referred to, except the type-specimens; that they are probably varietal forms may be true—no one disputes it; that they are very properly named should also be beyond dispute. Without the names the present

discussion would be impossible, a very instructive discussion, no doubt, but one entirely spoilt by the style Mr. de Nicéville has chosen to adopt; it does not help science, and only tends to bring systematic work into contempt, and is a great blot on his otherwise excellent work.

Subfamily SATYRINÆ.

Genus Anadebis, Butler.

19. Anadebis himachala (Moore), Cat. Lep. E. I. C., i., p. 234 (1857).

Genus VIRAPA, Moore.

20. Virapa anaxias (Hew.), Exot. Butt., iii., p. 86, Myc., pl. 4, f. 25, 26, 3 (1862).

Genus Gareris, Moore.

21. Gareris sanatana (Moore), Cat. Lep. E. I. C., i., p. 231 (1857).

Mycalesis gopa, Felder, Reise Nov. Lep., iii., p. 501 (1867).

I have received both the above seasonal forms.

Genus Orsotriæna, Wallengren.

22. Orsotriæna medus (Fabr.), Syst. Ent., p. 488 (1775). Mycalesis runeka, Moore, Cat. Lep. E. I. C., i., p. 234 (1857).

Both forms received.

Genus Calysisime, Moore.

23. Calysisime perseus (Fabr.), Syst. Ent., p. 488, ♀ (1775).

Papilio blasius, Fabr., Ent. Syst., Suppl., v., 426, 488, 489 (1798).

Not received by me, but recorded in Moore's Lep. Indica as in Mr. Crowley's collection from the Khasia Hills.

24. Calysisime mineus (Linn.), Syst. Nat., i., 2, 768 (1767).

Papilio drusia, Cram., Pap. Exot., i., pl. 84, f. c, p, ♀ (1775).

P. otrea, Cram., Pap. Exot., iv., pl. 314, f. A, B ♀ (1780).

25. Calysisime visala (Moore), Cat. Lep. E.I. C., i., p. 230 (1857).

Genus Pachama, Moore.

26. Pachama mestra (Hew.), Exot. Butt., ii., p. 79, Myc., pl. 1, f. 2 (1862).

Common.

Genus Samanta, Moore.

27. Samanta malsara (Moore), Cat. Lep. E. I. C., i., p. 231 (1857).

Samanta rudis, Moore, Trans. Ent. Soc., 1880, p. 166, 3.

The dry season form only has been received, S. rudis.

28. Samanta nicotia (Doubl.), Hew., Gen. D. L., p. 394, pl. 66, f. 6, \$\circ\$ (1851).

Samanta langii, de Nicé., Butt. of India, i., p. 130 (1883).

Recorded from the Khasias by de Nicéville, but not received by me from that locality.

29. Samanta misenus, de Nicé., Journ. Bo. Nat. Hist. Soc., 1889, p. 164, pl. A, f. 8, &.

Many examples from Shillong only.

Genus Kabanda, Moore.

30. Kabanda malsarida (Butler), Cat. Satyr. B. M., p. 134, pl. 3, f. 14 (1868).

Mycalesis khasiana, Moore, P. Z. S., 1874, p. 566. Both forms received.

Genus Neorina, Westwood.

31. Neorina westwoodi, Moore, Lep. Ind., i., p. 226, p. 74, f. 2, 2 A, 3 ? (1892).

Genus Rangbia, Moore.

- 32. Rangbia scanda (Moore), Cat. Lep. E. I. C., i., p. 218 & (1857).
- 33. Rangbia latiaris (Hew.), Exot. Butt., iii., Debis, pl. 1, f. 4, 3 (1862),

#### Genus Debis, Doubl.

- 34. Debis kansa, Moore, Cat. Lep. E. I. C., i., p. 220 (1857).
- 35. Debis sinorix, Hew., Exot. Butt., iii., Debis, pl. 3, f. 19, 20, 3 (1863).
- 36. Debis mekara, Moore, Cat. Lep. E. I. C., i., p. 219 (1857).
- 37. Debis chandica, Moore, l. c.
- 38. Debis vindhya, Felder, Wien. Ent. Monats., iii., p. 402, & (1859).

## Genus Lethe, Hübn.

- 39. Lethe europa (Fabr.), Syst. Ent., p. 500 (1775).
- 40 Lethe dyrta (Felder), Reise Nov. Lep., iii., p. 497, ♀ (1867).
- 41. Lethe rohria (Fabr.), Mant. Ins., ii., p. 45 (1787).
- 42. Lethe hyrania (Kollar), Hüg. Kasch., iv., 2, 449, pl. 17, f. 1, 2, & (1844).
- 43. Lethe dinarbas (Hew.), Exot. Butt., iii., p. 77, Debis, pl. 3, f. 15, 3 (1863).

## Genus Tansima, Moore.

44. Tansima verma (Kollar), Hüg. Kasch., iv., 2, 447, pl. 16, f. 1, 2 (1844).

Recorded from the Khasias, but not received by me.

## Genus Sinchula, Moore.

45. Sinchula sidonis (Hew.), Exot. Butt., iii., p. 77, Debis, pl. 3, f. 16, & (1863).

## Genus Zophoessa, Westwood.

46. Zophoessa sura, Doubl. & Hew., Gen. D. L., pl. 61, f. 1 (1849).

## Genus Blanaida, Kirby.

47. Blanaida bhadra (Moore), Cat. Lep. E. I. C., i.,p. 227 (1857).

48. Blanaida khasiana, Moore, Trans. Ent. Soc., 1881, p. 306.

Recorded from the Khasias; not received by me.

Genus Patala, Moore.

49. Patala yamoides, Moore, Lep. Ind., i., p. 307, pl. 94, f. 4 & (1892).

Genus Orinoma, Doubl.

50. Orinoma damaris, Doubl. in Gray's Lep. Ins. Nep., p. 14, pl. 7, f. 2, 2A (1846).

Genus YPTHIMA, Hübn.

- 51. Ypthima methora, Hew., Trans. Ent. Soc., 1864, p. 291, pl. 18, f. 20, 21, ♀.
- 52. *Ypthima baldus* (Fabr.), Syst. Ent. App., p. 829 (1775).
- 53. Ypthima newarra, Moore, P. Z. S., 1874, p. 567.
- 54. Ypthima lyeus, de Nicé., Journ. Bo. Nat. Hist. Soc., iv. (3), p. 165 (1889).
  Shillong.
- 55. Ypthima sakra, Moore, Cat. Lep. E. I. C., i., p. 236 (1857).
- 56. *Ypthima austeni*, Moore, Lep. Ind., ii., p. 69, pl. 109, f. 3, 3 A, ♂ ♀ (1892). Shillong.
- 57. Ypthima mahratta, Moore, Journ. As. Soc. Beng., liii. (2), i., p. 1 (1884).

Genus RAGADIA, Westwood.

58. Ragadia crisilda, Hew., Exot. Butt., iii., Euptychia et Ragadia, f. 5, 6, \$ (1862).

Common.

Genus Callerebia, Butler.

59. Callerebia orixa, Moore, P. Z. S., 1872, p. 555. Twelve examples from Cherra Punji.

Genus Melanitis, Fabr.

60. Melanitis leda (Linn.), Syst. Nat., i., 2, 773, 151 (1767).

- 61. Melanitis ismene (Cram.), Pap. Exot., i., pl. 26, f. A, B (1775).
- 62. Melanitis aswa, Moore, P. Z. S., 1865, p. 769.
- 63. Melanitis bela, Moore, Cat. Lep. E. I. C., i., p. 223 (1857).
- 64. Melanitis duryodana, Felder, Reise Nov. Lep., iii., p. 464 (1867).

#### Subfamily ELYMININÆ.

Genus Elymnias, Hübn.

- 65. Elymnias undularis (Drury), Ill. Ex. Ent., ii., pl. 10, f. 1, 2, 3 (1773).
- 66. Elymnias malela (Hew.), Ex. Butt., iii. (Mel.), pl. 1, f. 6, 7 (1863).

  Common.
- 67. Elymnias timandra, Wallace, Trans. Ent. Soc., 1869, p. 326.
- 68. Elymnias chelensis, de Nicé., Journ. Bo. Nat. Hist. Soc., 1890, p. 200, pl. d, f. 3.

  Three examples from Shillong.

Genus Dyctis, Boisd.

- 69. Dyctis patna (Westw.), Gen. D. L., p. 405 (note), pl. 68, f. 2 (1851).
- 70. Dyctis vasudeva (Moore), Cat. Lep. E. I. C., i., p. 238 (1857).

#### Subfamily MORPHINÆ.

Genus Amathusia, Fabr.

71. Amathusia portheos, Felder, Reise Nov. Lep., iii., p. 461 (1865).

One male. Shillong.

Genus Discophora, Boisd.

72. Discophora tullia (Cram.), Pap. Exot., i., pl. 81, f. A, B (1775).

Common.

Genus Enispe, Westwood.

- 73. Enispe euthymius, Doubl., Ann. Mag. N. H., xvi., p. 179 (1845).
- 74. Enispe cycnus, Westw., Gen. D. L., ii., p. 330 (1851). Four males and two females. Shillong.

Genus ÆMONA, Hew.

75. Æmona amathusia (Hew.), Trans. Ent. Soc, 1867, p. 566.

Shillong.

Genus Thaumantis, Hübn.

76. Thaumantis diores, Doubl., Ann. Mag. N. H., xvi., p. 234 (1845).

Genus Clerome, Westw.

77. Clerome arcesilaus (Fabr.), Mant. Ins., ii., p. 28 (1787).

Common, and very variable on the under side. In describing C. kirata from Padang, Perak, and Borneo, Journ. Bo. Nat. Hist. Soc., vi. (3), p. 344, pl. F, f. 3, 3 (1891), Mr. de Niceville says C. arcesilaus has the hind wing concolorous throughout, and that the bands are so narrow as to be lines; but this is really not always the case; two of my Khasia Hill specimens are not concolorous in the hind wing below, and have bands and not lines; I have specimens from Java, Celebes, Nias, Perak, Tenasserim, and India, and though the coloration below is fairly uniform in most specimens, the bands are of all sorts of widths, and it is very difficult to say where arcesilaus ends and kirata begins; though no doubt the extreme forms are distinct, and deserve separate names.

78. Clerome assama, Westw., Trans. Ent. Soc., 1856, p. 184.

Common.

Subfamily ACRÆINÆ.

Genus Pareba, Doubl.

79. Pareba vesta (Fabr.), Mant. Ins., ii., p. 14 (1787). Many examples.

Genus Telchinia,  $H\ddot{u}bn$ .

80. Telchinia violæ (Fabr.), Syst. Ent., p. 460 (1775).

## Subfamily NYMPHALINÆ. Genus Ergolis, Boisd.

- 81. Ergolis merione (Cram.), Pap. Exot., ii., pl. 144, f. с, н (1777).
- 82. Ergolis ariadne (Linn.), Syst. Nat., i., 2, 778, 170 (1767).

## Genus Euripus, Westw.

83. Euripus halitherses, Doubl. & Hew., Gen. D. L., ii., p. 293, pl. 41, f. 2, 3 (1850).

Many females, in the mimetic forms of  $Eupl\alpha a \ rhadamanthus$ , E. deione, and  $E. alcatho\ddot{e}$ .

## Genus Cupha, Billberg.

84. Cupha erymanthis (Drury), Ill. Ex. Ent., i., pl. 15, f. 3, 4 (1770).

## Genus Atella, Doubl.

- 85. Atella sinha (Kollar), Hüg. Kasch., iv., 2, 438, 1 (1848).
- 86. Atella phalanta (Drury), Ill. Ex. Ent., i., pl. 21, f. 1, 2 (1770).
- 87. Atella alcippe (Cram.), Pap. Exot., iv., pl. 389, f. с, н (1782).

## Genus Cethosia, Fabr.

- 88. Cethosia cyane (Drury), Ill. Ex. Ent., i., pl. 4, f. 1, \$\pi\$ (1770).
- 89. Cethosia biblis (Drury), l. c., f. 2, &.

## Genus Cynthia, Fabr.

90. Cynthia crota (Fabr.), Ent. Syst., iii., 1, 76, 237 (1793).

There are two seasonal forms of female in the Khasia Hills which differ widely from each other; the wet season form is the large well-known greenish grey insect; the dry season form of female is, however, small, as a rule smaller than the male, more or less ferruginous ochreous in colour like the male on the outer portions, pale bluish grey on the inner portions, with a very broad almost unmarked pure white band across both wings; some of

these females are quite yellow, and very nearly of the same colour as the males, and with very short blunt tails.

Genus Helcyra, Felder.

91. Helcyra hemina, Hew., Trans. Ent. Soc., 1864, p. 245, pl. 15, f. 1.

Genus Sephisa, Moore.

92. Sephisa chandra (Moore), Cat. Lep. E. I. C., i., p. 200, pl. 6 A, f. 4, 3 (1857).

Genus Apatura, Fabr.

- 93. Apatura namouna, Doubl., Ann. Mag. N. H., xvi., p. 178 (1845).
- 94. Apatura parvata, Moore, Cat. Lep. E. I. C., i., p. 202, pl. 6A, f. 6, 3 (1857).

Common.

95. Apatura parysatis, Westw., Gen. D. L., ii., p. 305 (1850).

Genus Hestina, Westw.

96. Hestina nama, Doubl., Ann. Mag. N. H., xvi., p. 232 (1845).

Genus Herona, Westw.

97. Herona marathus, Doubl. & Hew., Gen. D. L., ii., p. 294, pl. 41, f. 3 (1850).

Genus Precis, Hübn.

98. Precis iphita (Cram.), Pap. Exot., iii., pl. 209, f. c, D (1779).

Genus Junonia, Hübn.

99. Junonia asterie (Linn.), Syst. Nat., ed. x., p. 472 (1758).

100. Junonia almana (Linn.), l. c.

The above two are, as pointed out by me in P. Z. S., 1885, p. 128, different forms of one and the same species, probably seasonal forms, as suggested by de Niceville in Butt. of Ind., ii., p. 68 (1886). I possess a series, taken in Bombay, showing a perfect gradation from one to the other.

- 101. Junonia lemonias (Linn.), Syst. Nat., ed. x., p. 473 (1758).
- 102. Junonia hierta (Fabr.), Ent. Syst. Suppl., p. 424 (1798).
- 103. Junonia orithyia (Linn.), Mus. Ulr., p. 278 (1764).

Genus Rahinda, Moore.

- 104. Rahinda hordonia (Stoll), Suppl. Cram. Pap. Exot., pl. 33, f. 4, 4 D (1790).
- 105. Rahinda plagiosa (Moore), P. Z. S., 1878, p. 830.

Genus Neptis, Fabr.

106. Neptis radha, Moore, Cat. Lep. E. I. C., i., p. 166, pl. 14 A, f. 4 (1857).

One example. Shillong.

- 107. Neptis miah, Moore, Cat. Lep. E. I. C., i., p. 164, pl. 14A, f. 1 (1857).
- 108. Neptis ananta, Moore, Cat. Lep. E. I. C., i., p. 166, pl. 14 A, f. 3 (1857).

  Four examples.
- 109. Neptis viraja, Moore, P.Z.S., 1872, p. 563, pl. 32, f. 6. Shillong. Two examples of this distinct species, which I have also got from North Kanara.
- 110. Neptis cartica, Moore, l. c., p. 562. Common.
- 111. Neptis carticoides, Moore, Trans. Ent. Soc., 1881, p. 309.

Two males and one female. Shillong and Cherra Punji.

112. Neptis vikasi, Horsfield, Cat. Lep. E. I. C., pl. 5, f. 2, 2 A (1829).

Common.

113. Neptis harita, Moore, P. Z. S., 1874, p. 571, pl. 66, f. 8.

Two males and one female. Shillong. TRANS. ENT. SOC. LOND. 1893.—PART III. (SEPT.) U

114. Neptis adara, Moore, P. Z. S., 1878, p. 830.

Shillong. Two males, identical with my Rangoon and Mergui examples. Very closely allied to, and hardly separable from, *N. varmona*, Moore.

- 115. Neptis kamarupa, Moore, P. Z. S., 1874, p. 570.
- 116. Neptis astola, Moore, P. Z. S., 1872, p. 560. Several specimens.
- 117. Neptis emodes, Moore, P. Z. S., 1872, p. 561.

  Common, and very doubtfully distinct from the preceding.
- 118. Neptis khasiana, Moore, P. Z. S., 1872, p. 562, pl. 32, f. 7.

Apparently a rare species; only three received from Shillong.

119. Neptis cacharica, Butler, Trans. Ent. Soc., 1879, p. 3.

Shillong. One example, like type; a distinct and good species.

- 120. Neptis adipala, Moore, P. Z. S., 1872, p. 563, pl. 32, f. 8.
- 121. Neptis nandina, Moore, Cat. Lep. E. I. C., i., p. 168, pl. 14 A, f. 7 (1857).

Neptis soma, Moore, P. Z. S., 1858, p. 9, pl. 49, f. 6.

122. Neptis yerburii, Butler, P. Z. S., 1886, p. 360.

The Himalayan type of nandina and the Sikkim type of soma are identical: the insects that have been in Indian collections heretofore under the name of nandina are identical with Butler's type of yerburii, which is a perfectly distinct and well-separated species.

- 123. Neptis susruta, Moore, P.Z.S., 1872, p. 563, pl. 32, f. 4.
- 124. Neptis ophiana, Moore, P. Z. S., 1872, p. 561.

Genus Cirrhochroa, Doubl.

125. Cirrhochroa aoris, Doubl. & Hew. Gen. D. L., i., p. 158, pl. 21, f. 2, 3 (1848).

- 126. Cirrhochroa mithila, Moore, P.Z.S., 1872, p. 558.
- 127. Cirrhochroa jiraria, n. sp.
- 3. Of a uniform very pale fulvous above. Fore wings in some specimens absolutely without markings, except for a pale brown sinuous (not dentated) submarginal line; another similarly coloured line, less sinuous, and close to the margin; apex with a brown patch; in some specimens there is a slight indication of the medial line and streak across the cell. Hind wing with medial and discal transverse sinuous brown lines with black spots between them in the interspaces; a submarginal and another line close to the margin very indistinct; all the lines more or less sinuous, and not dentated as in *C. aoris*. Under side very pale uniform fulvous, with faint indications of the usual median band, and a few black points on the outside of the band on the hind wings only. Expanse of wings,  $2\frac{8}{10}$  in.

Shillong and Cherra Punji.

A good series received; all males. Allied to *C. aoris*, but seems to be very distinct. Can easily be distinguished by its peculiarly pale coloration, its small size, and absence of markings.

## Genus Pseudergolis, Felder.

128. Pseudergolis wedah (Kollar), Hüg. Kasch., iv., 2, 437, 1 (1848).

## Genus Stibochiona, Butler.

129. Stibochiona nieca (Gray), Lep. Ins. Nepal., p. 13, pl. 12, f. 1 (1846).

## Genus Hypolimnas, Hübn.

- 130. *Hypolimnas bolina* (Linn.), Syst. Nat., ed. x., p. 492 (1758).
- 131. *Hypolimnas mysippus* (Linn.), Mus. Ulr., p. 262 (1764).

## Genus Argynnis, Fabr.

- 132. Argynnis niphe (Linn.), Syst. Nat., ed. xii., i., 2, 785, 208 (1767).
- 133. Argynnis rudra, Moore, Cat. Lep. E. I. C., i., p. 157 (1857).

134. Argynnis childrene, Gray, Zool. Misc., i., p. 33 (1831).

## Genus Dichorragia, Butler.

135. Dichorragia nesimachus (Boisd.), Cuv., Regn. Anim. Ins., ii., pl. 139 bis, f. 1 (1836).

#### Genus Penthema. Westw.

136. Penthema lisarda (Doubl.), Ann. Mag. N. H. (1), xvi., p. 233 (1845).

#### Genus Parthenos, Hubn.

137. Parthenos gambrisius (Fabr.), Mant. Ins., ii., p. 12 (1787).

#### Genus Neurosigma, Butler.

138. Neurosigma siva (Westw.), Gen. D. L., ii., p. 291 (1850).

## Genus Lebadea, Felder.

139. Lebadea attenuata (Moore), P. Z. S., 1878, p. 829.

Many of both sexes; quite typical and indistinguishable from the Tenasserim and Mergui examples in my collection.

## Genus Limenitis, Fabr.

140. Limenitis austenia (Moore), P. Z. S., 1872, p. 560, pl. 32, f. 1.

Recorded from the Khasias; not received by me.

- 141. Limenitis danava, Moore, Cat. Lep. E. I. C., i., p. 180, pl. 6a, f. 2, 3 ? (1857).
- 142. Limenitis daraxa, Doubl., Hew. Gen. D. L., ii., p. 276, pl. 34, f. 4 (1850).
- 143. Limenitis zayla, Doubl., l. c., pl. 35, f. 4.
- 144. Limenitis zulema, Doubl., l. e., pl. 34, f. 1.
- 145. Limenitis dudu, Westw., Gen. D. L., ii., p. 276, (1850).

## Genus Moduza, Moore.

146. Moduza procris (Cram.), Pap. Exot., ii., pl. 106, f. E, F (1777).

## Genus Athyma, Westw.

- 147. Athyma perius (Linn.), Syst. Nat., ed. x., p. 471 (1758).
- 148. Athyma asura, Moore, Cat. Lep. E. I. C., i., p. 171, pl. 5a, f. 1 (1857).
- 149. Athyma opalina (Kollar), Hüg. Kasch., iv., 2, 427 (1848).

Cherra Punji. One example.

150. Athyma kanwa, Moore, P. Z. S., 1858, p. 17, pl. 51, f. 2.

Shillong. One example of this very distinct species.

151. Athyma pavara, Moore, Cat. Lep. E. I. C., i., p. 173, pl. 5A, f. 4 (1857).

Cherra Punji. One example.

152. Athyma orientalis, Elwes, Trans. Ent. Soc., 1888, p. 354, pl. 9, f. 4, 3.

Shillong. A fair series of both sexes; appears to be a good constant form.

- 153. Athyma ranga, Moore, Cat. Lep. E. I. C., i., p. 175, pl. 5a, f. 6 (1857).
- 154. Athyma selenophora (Kollar), Hüg. Kasch., iv. (2), p. 426, pl. 7, f. 1, 2, 3 (1848).
- 155. Athyma zeroca, Moore, P. Z. S., 1872, p. 564.
- 156. Athyma cama, Moore, Cat. Lep. E. I. C., i., p. 174, pl. 5a, f. 5, ♂ ♀ (1857).
- 157. Athyma inara, Doubl., Hew. Gen. D. L., ii., pl. 34, f. 3 (1850.)
  - Athyma inarina, Butler, Ann. Mag. N. H. (5), xvi., p. 304 (1885).

A very common, widely spread, and in the male a very variable species. I have received it in quantities from Sikkim, Buxar, Khasias, Rangoon (taken in April and November), and from Karwar in North Kanara on the S.W. coast, taken in August, 1887 and 1892, October, 1889, 1890, and November, 1890. I have it in almost every gradation from typical inara to typical inarina.

Genus Symphædra, Hübn.

158. Symphædra nais (Forst.), Nov. Sp. Ins. Cent., i., p. 73 (1771).

In Mr. Hamilton's list, but not received by me.

159. Symphædra teuta (Doubl.), Hew. Gen. D. L., ii., p. 291, pl. 44, f. 2, 3 (1850).

Shillong. Common.

160. Symphædra recta de Nicé., Butt. of India, ii., p. 188 (1886).

Shillong. A large series of both sexes.

- 161. Symphædra khasiana, n. sp.
- 3. Differs from S. dirtea, Fabr., on the upper side in its darker coloration, being almost black, and in the fore wings being unmarked, except for a pure white subapical point; occasionally an indication of one or two subcostal ochreous spots, and in the greenish outer marginal fascia being reduced to a few spots or streaks. On the under side the coloration is also very dark, in some specimens nearly black, smeared here and there with reddish ochreous.
- $\mathfrak{P}$ . Differs very materially from all the specimens of dirtea from the different localities I have examined. On the upper side the spots, instead of ochreous, are as white as they are in S. cyanipardus, and the hind wing has the same clear blue submarginal band enclosing large black spots, with pure white patches on each side; on the under side the coloration of the hind wings, instead of being bluish grey, is pale brownish ochreous, with pale ochreous spots. Expanse of wings,  $\mathfrak{F}$  3 $\frac{3}{10}$ ,  $\mathfrak{P}$  4 to 4 $\frac{3}{10}$  in.

Shillong and Cherra Punji.

I have in my own collection examples of S. dirtea from Thoungyan, Meplay, Donat Range, several parts of Burma, besides from Nias, Perak, Sumatra, and Borneo; and though they vary somewhat inter se, they maintain the well-known characteristics of typical S. dirtea; whereas the Khasia Hill form is characteristic in itself in both sexes, and very constant in all the specimens of the long series I have received.

162. C. cyanipardus, Butler, P. Z. S., 1868, p. 613. Common.

## Genus Euthalia, Hübn.

163. Euthalia derma (Kollar), Hüg. Kasch., iv. 2, 436, 2 (1848).

Common.

164. Euthalia nara (Moore), Trans. Ent. Soc., 1859, p. 78, pl. 8, f. 1, ♀.

Recorded by de Nicéville from the Khasias; not received by me.

- 165. Euthalia sahadeva (Moore), l. c., p. 80, pl. 8, f. 3, &. Shillong. One example.
- 166. Euthalia franciæ (Gray), Lep. Ins. Nepal, p. 12, pl. 14 (1846).
- 167. Euthalia lepidea (Butler), Ann. Mag. N. H. (4), i., p. 71 (1868).

  Common.
- 168. Euthalia telchinia (Mén.), Cat. Mus. Pet. Lep., ii., p. 100, pl. 9, f. 3, & (1857).

169. Euthalia appiades (Mén.), l. c., p. 120, pl. 9, f. 4, &. Common. At p. 350, Journ. Bo. Nat. Hist. Soc., 1891, Mr. L. de Nicéville enters into a long argument to show that E. appiades, and a number of what he admits to be local races, are specifically the same. It is the same never-ending argument as to what is or is not a species. If he admits they are local races, it is quite sufficient, and each deserves a name, "for the sake of convenience." In describing E. khasiana, I overlooked E. adima, Moore, and I am obliged to Mr. de Nicéville for pointing out my error; but what E. adima has to do with E. appiades, except that it is a local form of the commoner and widely-spread parent species, I cannot understand. It is undoubtedly a good local form; so also is E. sedeva,  $\mathfrak{P}$ , Moore, = E. balarama,  $\mathfrak{F}$ , Moore. This is confined to Buxar, in so far as my experience goes; and because E. appiades is a widely-spread parent species, that does not prevent E. sedeva from being a good local form. As to the intergrades between E. adima and E. appiades, all I can say is that although I have over two hundred thousand specimens of Lepidoptera in my museum, have collected for twenty years, and have *E. appiades* from Sikkim, Buxar, Burma, Assam, and the Khasias, I have never seen an intergrade; and if one or two have been found, they will prove nothing. Intergrades are found now and again, though no doubt very rarely, between all sorts of allied forms.

- 170. Euthalia adima (Moore), Cat. Lep. E. I. C., i., p. 194 (1857).
  - E. khasiana, Swinhoe, Ann. Mag. N. H., 1890, p. 354. Shillong.
- 171. Euthalia jhanu (Moore), Cat. Lep. E. I. C., i., p. 192 (1857).

Common. The male of E.jahnu above is very like E.adima; they can at once be separated by the under side, on account of the blue suffusion in the latter, but the females are very difficult to discriminate. I have received a long series, containing many males of both species, and also many females, all apparently identical, except that what I believe to be the females of E.adima are of a lighter colour.

- 172. Euthalia kesava (Moore), Trans. Ent. Soc., 1859, p. 67, pl. 3, f. 5, & \(\frac{2}{5}\).
- 173. Euthalia garuda (Moore), Cat. Lep. E. I. C., i., p. 186, pl. 6, f. 2, 2a, larva and pupa (1857).
- 174. Euthalia phemius (Doubl.), Gen. D. L., ii., pl. 41, f. 4, 3 (1850).
  - Adolias suncara, Moore, Cat. Lep. E. I. C., i., p. 105, 3 (1857).
- 175. Euthalia jama (Felder), Reise, Nov. Lep., iii., p. 431 (1866).
- 176. Euthalia lubentina (Cram.), Pap. Exot., ii., pl. 155, f. c, D, 3 (1777).
- 177. Euthalia merilia, n. sp.
- 3. Upper side of both wings olive-brown, the basal half of the wings dark brown, the edges of the dark portion irregular, but not toothed, as are the outer edges of the medial band of *E. garuda*;

outer half of the wings pale olive greyish brown, a submarginal darker band on fore wings, and brown dots on hind wings, as in garuda, the cell markings being also similar; two indistinct upper whitish lumulate spots on outer edge of the dark portion on the fore wings in one example, obsolete in others. Under side of a uniform pale brownish ochreous, outer margin of both wings with a greyish band; all markings quite obsolete in one specimen, a band of indistinct ochreons discal dots in others. Expanse of wings,  $2\frac{1}{2}$  in.

Cherra Punji. Three examples. Nearly allied to E. eriphylæ, de Nicé., Jo. Bo. N. H. Soc., 1891, p. 353, pl. F, f. 7, F. No doubt, like that species, it is a varietal form of F. garuda, Moore, but is sufficiently distinct to deserve a name.

## 178. Euthalia delmana, n. sp.

J. Upper side very dark olive-brown. Fore wings with a black bar in the cell near the base, and a broad similar band beyond middle of cell; the basal half of both wings very dark, nearly black, leaving the pale spaces in the cell of fore wings like large pale spots; outer portion of both wings paler than the basal portions, but without much contrast; a blackish somewhat irregular discal band across both wings; cilia of both wings pure white in parts. Under side of a uniform greyish olive-brown, as dark as in the under side of E. telchinia 3, but of a greenish, not ochrous, tint; the abdominal marginal area of hind wings decidedly greenish; fore wings with two black lines across cell near the base, a medial bent line joined above to an outer black circular mark at end of cell, an indistinct blackish shade beyond the cell, a discal band of brown spots ending with a large spot in the interno-median interspace, and a small white streak at apex. Hind wing with the usual cell-markings, an indistinct pale brown band just beyond the middle, and an equally indistinct discal row of brownish spots. Expanse of wings,  $2\frac{4}{10}$  in.

One example. Cherra Punji.

Above it somewhat resembles  $E.\ vasanta$ , Moore, from Ceylon; below it more nearly resembles the coloration and markings of  $E.\ telchinia$ , Mén., but is much smaller in size, and differently shaped, the apex of fore wings and anal angle of hind wings being more acute.

Genus Pyrameis, Hübn.

179. Pyrameis cardui (Linn)., Syst. Nat., ed. x., p. 475 (1758).

180. *Pyrameis indica* (Herbst.), Naturs. Schmett., vii., p. 171, pl. 180, f. 1, 2 (1794).

## Genus Vanessa, Fabr.

181. Vanessa canace (Linn.), Syst. Nat., ed. xii., i., 2, 779, 173 (1767).

## Genus Symbrenthia, Hübn.

- 182. Symbrenthia hippoclus (Cram.), Pap. Exot., iii., p. 46, pl. 220, f. c, d & (1779).
- 183. Symbrenthia khasiana, Moore, P. Z. S., 1874, p. 569. Recorded from the Khasias; not received by me.
- 184. Symbrenthia hypselis (Godart), Enc. Méth., ix., Suppl., p. 818 (1823).
  - Symbrenthia cotanda, Moore, P. Z. S., 1874, p. 569, pl. 66, f. 9, 3.
  - Symbrenthia sinis, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vi., p. 357, pl. F, f. 9, 3 (1891).

I have six males and one female from Java, and a number from Sikkim and the Khasias. The ground colour of the under side is not constant; two of my Javan examples are identical in coloration with Khasia Hill examples; the blotchings of the Javan specimens are as a rule darker than in the Indian examples, but this cannot be called a specific character, and is not sufficient, in my opinion, to establish even a local form, and therefore I do not think S. sinis can stand: if the Indian form could be separated from the Javan, it would have to stand under the name of S. cotanda, but that also is not a good form. Two Javan examples correspond fairly with Moore's figure; S. hypselis, wherever found, is undoubtedly a variable species both above and below.

## Genus Rhinopalpa, Felder.

185. Rhinopalpa fulva, Felder, Wien. Ent. Mon., iv., p. 399 (1860).

## Genus Cyrestis, Boisd.

186. Cyrestis thyodamas, Boisd., Cuv. Regn. An. Ins., ii., pl. 138, f. 4 (1836).

Common.

187. Cyrestis cocles (Fabr.), Mant. Ins., ii., p. 7 (1787). The form C. carli, Distant, appears to be just as common in the Khasias as the typical form. I have many intergrades.

188. Cyrestis risa, Hew., Gen. D. L., ii., p. 262, pl. 32. f. 4 (1850).

## Genus Kallima, Westiv.

189. Kallima limborgii, Moore, P. Z. S., 1878, p. 828.

This form of the *C. inachis* group is the common form in the Khasias. I have received a long series identical with Moore's type from Tenasserim, none of them being typical *K. inachis*.

## Genus Doleschallia, Felder.

190. Doleschallia polibete (Cram.), Pap. Exot., iii., pl. 234, f. d. (1779).

## Genus Eulepis, Moore.

- 191. Eulepis eudamippus (Doubl.), Ann. Soc. Ent. Fr. (2), i., p. 218, pl. 8 (1843).
- 192. Eulepis athamas (Drury), Ill. Ex. Ent., i., p. 5, pl. 2, f. 4 (1770).
- 193. Eulepis bharata (Felder), Reise, Nov. Lep., iii., p. 438 (1867).
  - Charaxas arja, de Nicé. (nec Felder), Butt. of India, ii., p. 278 1886).

## Genus Haridra, Moore.

- 194. *Haridra marmax* (Westw.), Cab. Or. Ent., p. 43, pl. 21,  $\sigma$  ? (1848).
- 195. Haridra lunawarra (Butler), Lep. Exot., p. 90, pl. 37, f. 2, 3 ? (1872).
- 196. Haridra aristogon (Felder), Reise. Nov. Lep., iii., p. 445 (1867).
- 197. Haridra corax (Felder), l. c., p. 444.

198. *Haridra khasiana* (Butler), Lep. Ex., p. 98, pl. 37, f. 6, ♂ ♀ (1872).

The most distinct of the *hierax* group, the basal coloration of the upper side being bluish grey, slightly tinged with fulvous in the females; the fulvous suffusion is very slight.

199. *Haridra hierax* (Felder), Reise, Nov. Lep., iii., p. 442 (1867).

200. Haridra hipponax (Felder), l. c., p. 443.

Very closely allied to, if not identical with, the preceding; in *hierax* the white band above is suffused with fulvous, but this character varies, and in other respects both forms in both sexes above and below are similar.

201. Haridra pleistoanax (Felder), l.c.

Also doubtfully distinct, the spots on the broad black outer band being apparently the only distinguishing character; and this is also variable, some examples having more spots than others.

202. Haridra khimarala (Butler), Lep. Ex., p. 97, pl. 37, f. 1, 3 2 (1872).

Uniformly darker than the above, but otherwise but doubtfully distinct.

203. *Haridra hindia* (Butler), *l. c.*, p. 99, pl. 37, f. 5, ♂♀.

A uniformly pale species; a much brighter and paler fulvous than the others, with spots on the black band as in *pleistoanax*, but with a very different shade of colour; the females are particularly pale. I have a long series of both sexes; they are very uniform in appearance, and I think this is a good species.

204. Haridra jalinder (Butler), l.c., p. 88, pl. 37, f. 4, 3 2.

Looks like a dark form of pleistoanax.

I give the above as I find them; that they are all good species I do not believe. I have long series in both sexes of all except H. kimarala, of which I have received only one male and two females; they are easier to separate in the females than in the males, except in the case of hierax and hipponax, in which the males can be separated, but the females are very similar to each other.

Family LEMONIIDÆ. Subfamily LIBYTHÆINÆ. Genus LIBYTHÆA, Fabr.

- 205. Libythæa myrrha, Godart, Enc. Meth., ix., p. 171 (1819).
- 206. Libythæa rohini, Marshall, Journ. As. Soc. Beng., xlix. (2), p. 428 (1880).

Recorded from the Khasias; not received by me.

Subfamily NEMEOBINÆ. Genus Dodona, Hew.

- 207. Dodona ouida, Moore, P. Z. S., 1865, p. 771.
- 208. Dodona adonira, Hew., Ex. Butt., iii., Dodona, pl. 1, f. 1, 2, 3 (1866).

Several examples.

209. Dodona longicandata, de Nicé., Proc. As. Soc. Beng., 1881, p. 121.

Recorded from the Khasias; not received by me.

- 210. Dodona egeon (Doubl.), Hew., Gen. D. L., ii., p. 422, pl. 59, f. 2 (1851).
- 211. Dodona eugenes, Bates, Journ. Linn. Soc., Zool., ix., p. 371 (1867).

Genus Stiboges, Butler.

212. Stiboges nymphida, Butler, P. Z. S., 1876, p. 309, pl. xxii., f. 1, ?.

Recorded from the Khasias; not received by me.

Genus Abisara, Felder.

- 213. Abisara fylla (Doubl.), Gen. D. L., ii., p. 422, pl. 59, f. 3, & (1851).
- 214. Abisara neophron (Hew.), Ex. Butt., ii., Sospita, pl. 1, f. 3 (1861).
- 215. Abisara chela, de Nicé., Journ. As. Soc. Beng., iv. (2), p. 252, pl. 11, f. 7, & (1886).

Genus Zemeros.

216. Zemeros flegyas (Cram.), Pap. Exot., iii., pl. 280, f. E, F (1780).

## Family LYCENIDE.

Genus Gerydus, Boisd.

217. Gerydus boisduvali (Moore), Cat. Lep. E. I. C., i., p. 19, pl. 1A, f. 1 ? (1857).

Genus Allotinus, Felder.

218. Allotinus drumila (Moore), P. Z. S., 1865, p. 777, pl. 41, f. 12, ?.

Recorded from the Khasias; not received by me.

219. Allotinus multistrigatus, de Nicé., Journ. As. Soc. Beng., lv. (2), p. 253; pl. 11, f. 11, &, 2 \, (1886). Recorded from the Khasias; not received by me.

Genus Poritia, Moore.

220. Poritia hewitsoni, Moore, P. Z. S., 1865, p. 775, pl. 41, f. 10, 3.

Genus Neopithecops, Distant.

221. Neopithecops zalmora (Butler), Cat. Fabr. Lep. B. M., p. 161 (1869).

Also both varieties, N. horsfieldii, Distant, and N. gama, Moore.

Genus Spalgis, Moore.

222. Spalgis epius (Westw.), Gen. D. L., ii., p. 502 (1852).

As Mr. de Nicéville, Butt. of Ind., iii., p. 54, states that this insect has never been recorded from Bombay, I may here state that I took it in Kolgaum and Kolaba in January, 1888, both places in the Thana District, close to Bombay.

Genus Taraka, de Nicé.

223. Taraka hamada (Druce), Cist. Ent., i., p. 361 (1875). Shillong.

Genus Megisba, Moore.

224. Megisba malaya (Horsfield), Cat. Lep. E. I. C., p. 70 (1828).

Genus Chilades, Moore.

225. Chilades laius (Cram.), Pap. Exot., iv., p. 62, pl. 319, f. d., E, Q (1780).

#### Genus Cyaniris.

226. Cyaniris marginata, Moore, P. Z. S., 1883, p. 523, pl. 48, f. 6, 3.

————, de Nicé., Journ. As. Soc. Beng., lii. (2), p. 70, pl. 1, f. 9, & (1883).

Common.

Undoubtedly in this species, as in several others in both the papers above referred to, Mr. Moore ought to have priority, because, although Mr. de Nicéville's paper may have been published a few days earlier, he used Mr. Moore's MS. names, unfortunately omitting to give Mr. Moore the credit for them.

## 227. Cyaniris victoria, n. sp.

- J. Upper side dull pale bluish grey; centres of both wings whitish. Fore wings with a brown band, attenuated hindwards. Hind wing with a brown marginal line, and in some examples pale grey submarginal lunules. Under side greyish white, with a dull glazed appearance; markings very faint and indistinct. Fore wing with a mark across end of cell, and a discal row of pale lunules or transverse streaks. Hind wing with a subcostal dot near base, another below it in middle of wing; a subcostal dot towards apex, terminating à discal outwardly curved irregular row of streaks, very indistinct, and often invisible.
- $\mathfrak{P}$ . Upper side darker than the males; marginal band blacker, deeper, especially at the apex, and running along costa; internal space whiter, as also is cilia, and a dark costal band. Under side coloured and glazed like the male; markings more distinct, the discal streaks more or less joined together. Expanse of wings,  $\mathfrak{F}$   $1\frac{1}{10}$ ,  $\mathfrak{P}$   $1\frac{3}{10}$  in.

Shillong. Ten males and four females.

Above something like a faded dry season form of *C. jynteana*, Moore; the under side like nothing I know of. I have submitted these insects to all the best Indian lepidopterists in England, and all agree that it is a good and new species; they came in one batch, April, 1892, and I have never received any since.

# 228. Cyaniris albocæruleus (Moore), P. Z. S., 1879, p. 139.

A number of examples. The female of this insect appears to be variable; one example in my collection

from Dhera Dhoon has the marginal border of fore wing above of the typical form, not reaching posterior angle, but neither does it extend along the costa. The only female I have received from the Khasias has also the marginal black band diffuse at the first median branch, and not reaching the hinder angle; whereas Mr. de Nicéville records specimens from Masuri and Sikkim with the band wide at the angle.

229. Cyaniris transpectus (Moore), P. Z. S., 1879, p. 139. Cyaniris latimarga, Moore, P. Z. S., 1883, p. 523, pl. 48, f. 9, 3.

A common species in the Khasias. I think de Nicéville is right in stating that the above two are seasonal forms of each other. I have received many of both sexes from Mr. Hamilton, taken at different times of the year; some of the females of latimargo, the rainy form, have the hind wings nearly all black, completely covering and hiding the black marginal spots and submarginal lunular band, and with only a small dull whitish or pale space in the upper disc; the males are identical with Moore's type.

- 230. Cyaniris puspa (Horsfield), Cat. Lep. E.I C., p. 67 (1828).
- 231. Cyaniris chennellii, de Nicé., Journ. A. S. B., lii. (2), p. 72, pl. 1, f. 10, & (1883).

  Many males and one female.

Many examples.

233. Cyaniris jynteana, Moore, P. Z. S., 1883, p. 524, pl. 48, f. 10, ♂.

———————, de Nicé., Journ. A. S. B., lii. (2), p. 69, pl. 1, f. 7, ♂, 7 A, ♀ (1883).

Common, in both wet and dry season forms.

234. Cyaniris dilectus (Moore), P. Z. S., 1879, p. 139. Shillong. Apparently rare; only thirteen examples received.

235. Cyaniris limbatus (Moore), P. Z. S., 1879, p. 139.

Recorded from Shillong by de Nicéville, Butt. of India, iii., p. 109; not received by me. I received all the Lycænidæ collected by Mr. Hamilton for two years and more, and cannot but think there is some mistake in this record; in a carefully kept record of many years I find I have never obtained this species, except from Ceylon and the South of India.

## Genus Zizera, Moore.

236. Zizera maha (Kollar), Hüg. Kasch., iv. (2), p. 622 (1848).

At p. 116, Butt. of India, vol. iii., de Nicéville states that Z. ossa, Swinh., P. Z. S., 1885, p. 132, pl. 9, f. 11 3, 12 2, described from Bombay, is evidently the dry season form of Z. maha. Surely this is jumping to a wonderful conclusion; that it is a southern or local form of Z. maha is probably true, but to make it a dry season form of maha you must first prove that maha is to be found in Bombay. I collected in Bombay for nearly twenty years, -my written record runs back for fifteen years,—yet I never took maha in Bombay; but ossa is a common form, of which I have taken great numbers in every month from September to June in Poona and Bombay; Mahableshwur, 5000 ft. (where you might expect to find maha, if it existed in the South), in May; Alimednagar, September; and have received it from the Anamalli and Nilgiri Hills; the tint of colour is quite different.

237. Zizera karsandra (Moore), P. Z. S., 1865, p. 505, pl. 31, f. 7, \, \cdot \.

238. Zizera gaika (Trimen), Trans. Ent. Soc. (3), i., p. 403 (1862).

Several examples.

TRANS. ENT. SOC. LOND. 1893.—PART III. (SEPT.) X

239. Zizera sangra (Moore), P. Z. S, 1865, p. 772, pl. 41, f. 8, 3.

Lycæna indica, Murray, Trans. Ent. Soc. Lond., 1874, p. 525, pl. 10, f. 2 &, 3 \cong .

The only difference between sangra and indica is that the type of the former is without the twin spots of the discal row near the hinder margin on the fore wings below, but this is not a constant character.

## Genus Lycenesthes, Moore.

240. Lycanesthes emolus (Godart), Enc. Méth., ix., p. 656 (1823).

Many specimens.

241. Lycanesthes lycannia, Felder, Verh. zool.-bot. Ges. Wien., xviii., p. 281 (1868).

Common.

Genus Niphanda, Moore.

242. Niphanda cymbia, de Nicé., Journ. A. S. B., lii. (2), p. 76, pl. 9, f. 8 &, 8 A \( \chi \) (1883).

Shillong. Two males.

## Genus Talicada, Moore.

243. Talicada nyscus? (Guerin), Delless, Voy. l'Inde, p. 78, pl. 22, f. 1, 1 A (1843).

I call this insect nyseus doubtfully; it is figured from the Khasias by de Nicéville in Butt. of Ind., iii., pl. 26, f. 179, but is certainly not typical. Guerin's nyseus, which is common in Southern India, have all the three black bands on the under side of the fore wing joined together, making the outer third black, with two bands of white spots; whereas in the Khasia form the third band is well separated. I have a large series of each kind; the difference is certainly greater and far more constant than the difference between Symbrenthia hypselis and S. sinis, and I propose to call it T. khasiana; it is apparently in great numbers.

## Genus Everes, Hübn.

244. Everes parrhasius, Fabr., Ent. Syst., iii. (1), p. 289 (1793).

This may belong to the variable species argiades, Pallas, as stated by de Nicéville, who appears to have

worked the matter out very carefully and well; but all the examples I have received from the Khasias, where it seems to be very common, are all typical parrhasius.

245. Everes kala, de Nicé., Butt. of India, iii., p. 139, pl. 26, f. 181 (1890).

Six examples.

Genus Nacaduba, Moore.

- 246. Nacaduba macropthalma (Felder), Verh. zool.-bot. Ges. Wien., xii., p. 483 (1862).
- 247. Nacaduba viola (Moore), Ann. Mag. N. H. (4), xx., p. 340 (1877).
- 248. Nacaduba pavana (Horsf.), Cat. Lep. E. I. C., p. 77 (1828).
  Shillong. Three males.
- 249. Nacaduba atrata (Horsfield), Cat. Lep. E. I. C., p. 78 (1828).

  Lampides prominens, Moore, Ann. Mag. N. H. (4), xx., p. 341 (1877).

  Common.
- 250. Nacaduba cœlestis, de Nicé., Journ. A. S. B., lv. (2), p. 366, pl. 17, f. 11 & (1886). Seven examples.
- 251. Nacaduba ardates (Moore), P. Z. S., 1874, p. 574, pl. 67, f. 1.
- 252. *Nacaduba dana*, de Nicé., Journ. A. S. B., lii. (2), p. 73, pl. 1, f. 15 & (1883). Shillong. Two examples.

Genus Jamides, Hübn.

253. Jamides bochus (Cram.), Pap. Exot., iv., p. 210, pl. 391, f. c, d & (1782).

Genus Lampides, Hübn.

254. Lampides elpis (Godart), Enc. Méth., ix., p. 654 (1823).

255. Lampides alexis (Stoll), (nec Scopoli), Suppl. Cram. Pap. Exot., v., pl. 38, f. 3, 3 c & (1790).

Hesperia adrianus, Fabr., Ent. Syst., iii., i., p. 280 (1793).

Genus Catochrysops, Boisd.

256. Catochrysops strabo (Fabr.), Ent. Syst., iii., i., 287, 101 (1793).

Common.

257. Catochrysops lithargyria (Moore), Ann. Mag. N. H. (4), xx., p. 340 (1877).

Shillong. Six males and three females; the peculiar shade of blue coloration in both sexes makes it very distinct. I have also received it from Palawan, N. Borneo.

258. Catochrysops enejus (Fabr.), Ent. Syst., Suppl., p. 430 (1798).

Common.

259. Catochrysops contracta (Butler), P. Z. S., 1880, p. 406, pl. 39, f. 3 &.

Shillong. Two or three examples. This may be, as suggested by de Nicéville, a dwarfed form of the preceding, but it is always of a more brilliant blue coloration. It is curious that the allied form, *C. pandava*, so widely spread throughout the Indo-Malayan Region, has never been recorded from the Khasias.

## Genus Tarucus, Moore.

260. Tarucus plinius (Fabr.), Ent. Syst., iii., i., 284, 92 (1793).

Although I received, I believe, all the *Lycanida* (except a few rare examples sent to Mr. de Nicéville) that Mr. Hamilton's collectors brought in for a period of nearly two years, I received only a few specimens of this species, and none of any other species of this genus.

Genus Castalius, Hübn.

261. Castalius rosimon (Fabr.), Syst. Ent., 523, 341 (1775).

Common.

262. Castalius ananda, de Nicé., Journ. A. S. B., lii. (2), p. 75, pl. 1, f. 11, 11 A, ♂♀ (1883). Shillong. Five examples.

263. Castalius elna (Hew.), Ex. Butt., v., Lycæna, pl. 1, f. 8 \, (1876).

Genus Polyommatus, Latreille.

264. Polyommatus bæticus (Linn.), Syst. Nat., xii., i., 2, 789, 226 (1767).

Genus Iraota, Moore.

265. Iraota timoleon (Stoll), Suppl. Cram. Pap. Ex., v., pl. 32, f. 4, 4 D ? (1790).

Several examples, amongst them two very curious male varieties; the upper side in one has very little blue colour; in the other it is quite as blue as any of them; but the under sides of both have the hind wings of a uniform dark rich chestnut colour, without any of the usual white markings.

Genus Surendra, Moore.

266. Surendra quercetorum (Moore), Cat. Lep. E. I. C., i., p. 42, pl. 1 A, f. 7 & (1857).

Very common.

Genus Arhopala, Boisd.

267. Arhopala pirithous (Moore), P. Z. S., 1883, p. 531. The common Khasia Hill form of the Centaurus group.

268. Arhopala adorea, de Nicé., Butt. of India, iii., p. 238, frontispiece, f. 139 & (1890).

Recorded from the Khasias; not received by me.

269. Arhopala ænca (Hew.), Ill. D. L. Lep., p. 14, e, pl. 3, c, f. 55, & (1869).

Recorded from the Khasias; not received by me. I have several examples from Sikkim.

270. Arhopala bazalus (Hew.), Cat. Lyc. B. M., p. 8, pl. 4, f. 37, 38, \$\gamma\$ (1862).

Recorded from the Khasias; not received by me.

271. Arhopala singla, de Nicé., Journ. A. S. Beng., liv. (2), p. 119, pl. 2, f. 8 &, 7 \, (1885).

Shillong. Four males and one female.

272. Arhopala teesta (de Nicé.), Journ. A. S. B., lv. (2), p. 253, pl. 11, f. 3, \$\frac{1}{3}\$ (1886).

Shillong. One example.

273. Arhopala fulgida (Hew.), Ill. D. L. Lep. Lyc., p. 11, pl. 5, f. 31, 3 (1863).

Recorded from the Khasias; not received by me. I have many examples from Sikkim.

- 274. Arhopala diardi (Hew.), Cat. Lyc. B. M., p. 9, pl. 5, f. 41, 42, \(\gamma\) (1862).

  Cherra Punji. One male.
- 275. Arhopala camdeo (Moore), Cat. Lep. E. I. C., i., p. 41, pl. 1a, f. 6, \( \gamma\) (1857). Shillong. Two examples, both females.
- 276. Arhopala opalina (Moore), P. Z. S., 1883, p. 531, pl. 49, f. 1, 3.

  Recorded from the Khasias; not received by me.
- 277. Arhopala moelleri (de Nicé.), Journ. A. S. B., lii. (2), p. 80, pl. 9, f. 4, 4 a, 3 ? (1883).

  Recorded from the Khasias; not received by me.
- 278. Arhopala peramuta (Moore), Cat. Lep. E. I. C., i., p. 42 (1857).

  Shillong and Cherra Punji. Several examples.

279. Arhopala paramuta (de Nicé), Journ. As. Soc. Beng., lii. (2), p. 81, pl. 9, f. 7 &, 7 a \$ (1883).

Shillong. Three examples.

Genus Curetis, IIübn.

280. Curetis gloriosa, Moore, P. Z. S., 1883, p. 522, pl. 48, f. 1, 3.

Shillong. One male example of this large-sized species of the thetys group.

281. Curetis bulis (Doubl.), Hew. Gen. D. L., ii., p. 473, pl. 75, f. 5, \$\delta\$ (1852).

Curetis discalis, Moore, P. Z. S., 1879, p. 138.

Many examples. No doubt, as de Nicéville says, there are plenty of intermediates between the two typical forms, showing that it is a variable species.

Genus Zephyrus, Dalman.

282. Zephyrus khasia, de Nicé., Butt. of India, iii., p. 301 (1890).

Recorded from the Khasias; not received by me.

Genus Ilerda, Doubl.

283. *Ilerda epieles* (Godart), Enc. Méth., ix., p. 646 (1823).

Many examples; apparently very plentiful.

284. *Ilerda androcles* (Doubl.), Hew. Gen. D. L., ii., pl. 75, f. 2, & (1852).

A male in my museum from the Khasias, received from Mr. Moore; and a female from Shilling, received from Col. Marshall, but not received from Mr. Hamilton.

Genus Arrhenothrix, de Nicéville.

285. Arrhenothrix penicilligera, de Nicé., Butt. of India, iii., p. 337, pl. 28, f. 214, & (1890).

Shillong and Cherra Punji. Many males and two females. Two of the males have the apical black band of fore wings above somewhat narrower than in the others; the blackish apical band of the hind wings is also absent or very much reduced, the white discal

band below is just as narrow as in the others; and this is the only apparent superficial difference to distinguish these two insects from the Javan Dacalana vidura, Horsfield; and were it not for the difference in the number of the subcostal nervules of fore wing, pointed out by de Nicéville, it would be impossible to believe they were distinct insects. These two were taken at Shillong in May, and I imagine are only the dry season form of penicilligera.

Genus Camena, Hew.

286. Camena ctesia, Hew., Ill. D. L., p. 48, pl. 20, f. 1, 2, 3 (1865).

Common.

287. Camena cleobis (Godart), Enc. Méth., ix., p. 634 (1823).

Shillong. One male example. I have this species also from Sikkim ( $M\ddot{o}wis$ ), and from Karwar in N. Kanara (Aitken).

288. Camena deva (Moore), Cat. Lep. E. I. C., i., p. 46 (1857).

Shillong. Three males. They vary somewhat from each other in the breadth of the black apical band. I have this insect from Ceylon and from Karwar, North Kanara.

289. Camena ister (Hew.), Ill. D. L. Lep., p. 43, pl. 19, f. 15, 16, \$\gamma\$ (1865).

Camena carmentalis, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vii., p. 335, pl. н, f. 10, & (1892).

Shillong. One example, a female, which corresponds with Hewitson's description, and also very closely with de Nicéville's description, of *carmentalis*, which I have no doubt is the male of *ister*.

290. Camena cotys (Hew.), Ill. D. L., p. 43, pl. 19, f. 19, 20, & (1865).

Shillong. One male.

291. Camena cippus (Fabr.), Ent. Syst., v., Suppl., p. 429 (1798).

Shillong. One example.

Genus Mota, de Nicéville.

292. Mota massyla (Hew.), Ill. Diurn. Lep. Suppl., p. 7, pl. 3, f. 87, 88, 3 (1869).

Shillong. One example.

Genus Aphnæus, Hübn.

293. Aphnæus syama (Horsf.), Cat. Lep. E. I. C., p. 107 (1829).

Common.

294. Aphnæus himalayanus, Moore, Journ. A. S. B., liii. (2), p. 26 (1884).

Common.

295. Aphnæus orissanus, Moore, l. c., p. 27.
Shillong. One male and two females. Probably, as

Shillong. One male and two females. Probably, as suggested by de Nicéville, it is only a var. of syama.

Genus Tajuria, Moore.

296. Tajuria maculata (Hew.), Ill. D. L. Lep., p. 47, pl. 21, f. 29, 30, \( \gamma \) (1865). Common.

297. Tajuria diæus (Hew.), l. c., p. 45, pl. 20, f. 27, 28, & , 26, \cdot \cdo

Recorded from the Khasias; not received by me.

298. Tajuria melastigma, de Nicé., P. Z. S., 1887, p. 460, pl. 40, f. 1, 3.

Recorded from the Khasias; not received by me.

299. Tajuria jangala (Horsf.), Cat. Lep. E. I. C., p. 113, \$\gamma\$ (1829).

Common.

300. Tajuria megistia (Hew.), Ill. D. L. Lep. Suppl., p. 5, pl. Suppl., 3, f. 77, 78, & (1869).

Cherra Punji. Several males and two females. The females are blackish brown above, with a patch of blue in the middle of the interno-median interspace of fore wings, slightly extended into the base of the interspace above. Under side exactly as in the male.

301. *Tajuria thyia*, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vii., p. 336, pl. н, f. 11, ♂ (1892).

Recorded from the Khasias; not received by me.

302. Tajuria illurgis (Hew.), Ill. D. L., Suppl., p. 10, pl. 4, f. 37, 38 & (1869).

Shillong. One example.

Genus Thecla, Fabr.

303. Thecla leechii, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vii., p. 335 (1892).

Recorded from the Khasias; not received by me.

Genus Suasa, de Nicéville.

304. Suasa lisides (Hew.), Ill. D. L., p. 33, pl. 14, f. 28, 29, & (1863).

One male from Shillong, one female from Cherra Punji. The female has no blue colour on the hind wings; large brown spots above the tails, succeeded by two white spots; on the under side the submarginal band of curved lines on the hind wing is very prominent, and the black spots at apex and near tails large.

Genus Hypolycena, Godart.

305. Hypolycena erylus (Godart), Enc. Méth., ix., p. 633 (1823).

Common.

Genus Cliaria, Moore.

306. Cliaria othona (Hew.), Ill. D. L., p. 50, pl. 22, f. 17, 18, & (1865).

Common.

307. Cliaria kina (Hew.), l. c., Suppl., p. 13, pl. 5, f. 32, ♂, 33, 34, ♀ (1869).

Shillong. One male. I have it also from Napal.

308. Cliaria cachara (Moore), P. Z. S., 1883, p. 527, pl. 49, f. 6, 3.

Shillong. Three males. A perfectly distinct species. I have it also from the North Cachar Hills.

Genus Zeltus, de Nicéville.

309. Zeltus etolus (Fabr.), Mant. Ins., ii., p. 66 (1787). Common.

Genus Charana, de Nicéville.

310. Charana mandarinus (Hew.), Ill. D. L. Lep., p. 28, pl. 11, f. 6, 7, \(\gamma\) (1863).

Shillong. One male.

Genus Cheritrella, de Nicéville.

311. Cheritrella truncipennis, de Nicé., P. Z. S., 1887, p. 456, pl. 39, f. 4, 3, 3, \( \frac{1}{2} \).

Shillong. One example.

Genus Ticherra, de Nicéville.

312. Ticherra acte (Moore), Cat. Lep. E. I. C., i., p. 47, ♀ (1857).

Common.

Genus Cheritra, Moore.

313. Cheritra freja (Fabr.), Ent. Syst., iii., 1, 263, 19 (1793).

Common.

Genus Horaga, Moore.

314. Horaga sikkima, Moore, P. Z. S., 1883, p. 525. Recorded from the Khasias; not received by me.

315. Horaga onyx (Moore), Cat. Lep. E. I. C., i., p. 30 (1857).Two examples from Cherra Punji.

Genus Catapæcilma, Butler.

316. Catapæcilma elegans (Druce), P. Z. S., 1873, p. 350, pl. 32, f. 12, ♀. Common.

Genus Loxura, Horsfield.

317. Loxura atymnus (Cram.), Pap. Exot., iv., p. 82, pl. 331, f. d, e (1780). Common.

Genus Yasoda, de Nicéville.

318. Yasoda tripunctata (Hew.), Ill. D. L. Lep., p. 26 (1863). Shillong. One male.

Genus Lehera, Moore.

319. Lehera eryx (Linn.), Mant. Plant., p. 537 (1771). Shillong. Two females.

Genus Deudorix, Hew.

320. Deudorix epijarbas (Moore), Cat. Lep. E. I. C., p. 32 (1857).

Common.

321. Dendorix gætulia, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vii., p. 338, pl. H, f. 12, & (1892).

Cherra Punji. One example.

Genus Zinaspa, de Nicé.

322. Zinaspa todara (Moore), P. Z. S., 1883, p. 530.

Rapala distorta, de Nicé., P. Z. S., 1887, p. 641, pl. 40, f. 6, ♀.

One example. I have this species also from Sikkim; it is identical with Moore's type.

Genus Rapala, Moore.

323. Rapala varuna (Horsfield), Cat. Lep. E. I. C., p. 91 (1829).

Common. De Nicéville does not include this as an Indian species in his Butt. of India. I have, however, many examples of both sexes, received from Mr. Hamilton; and a long series from Java, received from Major Holtz from Lawang. The two are absolutely identical; and I have compared both at the British Museum. I have one example also from Port Blair, received from Wimberley.

324. Rapala sphinx (Fabr.), Syst. Ent., p. 520 (1775).

Shillong. Three males identical with the Javan form, which I have from Lawang. It is much larger than varuna, and quite differently coloured above, being a beautiful insect, shot with brilliant blue.

325. Rapala buxaria, de Nicé., Journ. A. S. B., lvii. (2), p. 285, pl. 14, f. 13, & (1888).

Common; many examples received. The only female received is brown above, suffused with purplish, with a dark brown broad apical border; the coloration below is yellower than in the male, much the tint of the female of R. petosiris, but slightly paler, markings similar to the male; transverse bands more red, red mark outside the spot above the tail bright red. I do not think I can be mistaken, on account of the peculiar cut of the insect, which bears a striking resemblance to the male, and was received in the same lot.

326. Rapala tara, de Nicé., l. c., p. 284, pl. 14, f. 11, &. Shillong. Several examples, all males. One has the under side much darker coloured than the rest, more

of a reddish chestnut colour, but in every other respect it is identical with the others.

- 327. Rapala schistacea (Moore), P. Z. S., 1879, p. 140. Common.
- 328. Rapala orseis (Hew.), Ill. D. L. Lep., p. 23 (1863). Dendurix grisea, Moore, P. Z. S., 1879, p. 140. Several examples.
- 329. Rapala rosacea, de Nicé., Journ. A. S. B., lvii. (2), p. 285, pl. 14, f. 12, \$\delta\$ (1888). Shillong. Three males.
- 330. Rapala nissa (Kollar), Hüg., Kasch., iv. (2), p. 412, pl. 4, f. 3, 4 (1848).

The commonest *Rapala* in the Khasias, and very variable in respect to the red spot on the fore wings above.

331. Rapala refulgens, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vi., p. 376, pl. F, f. 18 (1891).

Recorded from the Khasias; not received by me.

332. Rapala petosiris (Hew.), Ill. D. L. Lep., p. 22, pl. 9, f. 30, 31, & (1868).

Common.

Genus Bindahara, Moore.

333. Bindahara phocides (Fabr.), Ent. Syst., iii., 1, 282, 85, \( \chi \) (1793).

Shillong. One example.

Genus Sinthusia, Moore.

334. Sinthusia grotei (Moore), P. Z. S., 1883, p. 527, pl. 49, f. 5, 3.

Shillong. Three examples.

Family PAPILIONIDÆ.
Subfamily PIERINÆ.
Genus Terias, Swains.

335. Terias harina, Horsf., Cat. Lep. E. I. C., p. 137 (1829).

Common.

336. Terias læta, Boisd., Sp. Gen., i., p. 674 (1836).

- 337. Terias purræa, Moore, P. Z. S., 1882, p. 252.
- 338. Terias hecabe (Linn.), Mus. Ulr., p. 249 (1764).

Genus Colias, Fabr.

339. Colias fieldii, Mén., Cat. Mus. Petr. Lep., i., p. 79, pl. 1, f. 5 (1855).

Genus Ixias, Hübn.

340. *Ixias evippe*, & (Drury), Ill. Ex. Ent., i., pl. 5, f. 2 (1773).

Papilio pirithons, 2, Fabr., Syst. Ent., p. 483 (1775). Common.

341. *Ixias pyrene*, & (Linn.), Mus. Ulr., p. 241 (1764). *Papilio œnippe*, \$\mathbf{c}, Cram., Pap. Exot., ii., pl. 105, f. c, decomposition (1779).

Common. There appear to be two seasonal forms, one smaller than the other, the male having hardly a trace of the black macular marginal band to the hind wings above.

Genus Hebomoia, Hübn.

342. Hebomoia glaucippe (Linn.), Mus. Ulr., p. 240 (1764). Common.

Genus Dercas, Boisd.

343. Dercas verhuellii (Hoev.), Tijd. Nat. Gesch., v., pl. 8, f. 3, 4 (1838).

Common.

344. Dercas wallichii (Doubl.), Proc. Ent. Soc. Lond., v., p. 47 (1849).

Many examples.

345. Dercas urania (Butler), P. Z. S., 1865, p. 458, pl. 26, f. 5.

Several examples. Kirby puts it as a synonym of the preceding, but I think it must be a good species, having never seen any intermediates.

Genus Catopsilia, Hübn.

- 346. Catopsilia pyranthe (Linn.), Mus. Ulr., p. 245 (1764).
- 347. Catopsilia ilea (Fabr.), Ent. Syst., Suppl., p. 426, (1798).

Differs from pyranthe in having a narrow black marginal border to fore wings above, composed of lunules

below the apex, decreasing in size hindward, and extending only to the first median interspace; sometimes an indication of a lumule in the interno-median interspace; the female has also a lumulated marginal border, broader than in the male, and extending in a thin line to the hinder margin; it is probably a seasonal form of pyranthe.

348. Catopsilia thisorella (Boisd.), Sp. Gen., i., p. 609 (1836).

Generally smaller than either of the two preceding; the male usually with no black border, never with more than an indication of it; the female with a pale border, very narrow and lumulate; this may also be a seasonal variety of *pyranthe*; but I have in my museum long series of all three, and each appears to be very constant in these characters.

349. Catopsilia philippina (Cram.), Pap. Exot., iv., pl. 361, f. c, d (1782).

Callidrias gnoma, Butler, Lep. Exot., i., p. 43, pl. 16, f. 1—4 (1870).

350. Catopsilia catilla (Cram.), Pap. Exot., iii., pl. 229, f. d., E (1782).

Genus Metaporia, Butler.

351. Metaporia agathou (Gray), Zool. Misc., p. 33 (1832). Very common.

Genus Pontia, Fabr.

352. *Pontia xiphia* (Fabr.), Sp. Ins., ii., p. 43 (1781). Common.

Genus Huphina, Moore.

353. Huphina phryne (Fabr.), Syst. Ent., p. 473 (1775).

354. Huphina nama (Doubl.), List B. M., i., p. 28 (1844).

355. *Huphina amba* (Wallace), Trans. Ent. Soc. Lond. (3), iv., p. 340 (1867).

Genus Appias, Hübn.

356. Appias zelmira (Cram.), Pap. Exot., iv., pl. 320, f. c, p (1782).

Common.

357. Appias nero (Fabr.), Ent. Syst., iii., p. 153 (1793). Many examples.

Genus Catophaga, Hübn.

358. Catophaga darada (Feld.), Reise, Nov. Lep., p. 142 (1865).

One pair. Felder's type came from the Khasia Hills. I have two pairs also from Palene, Burma, taken in June, 1887, which are identical with my Khasia examples.

Genus Hyposcritia, Moore.

359. Hyposeritia lalage (Doubl.), Gray, Zool. Misc., p. 76 (1842).

360. Hyposcritia pseudolalage (Moore), P. Z. S., 1879, p. 142.

Several examples. Shillong and Cherra Punji.

361. Hyposeritia mahana (Moore), Ann. Nat. Hist., 1877, p. 48.

362. *Hyposcritia indra* (Moore), P. Z. S., 1857, p. 103, pl. 44, f. 5, \(\theta\).

Shillong. Three examples.

Genus Prioneris, Wallace.

363. Prioneris thestylis (Doubl.), Gray, Zool. Misc., p. 76 (1842).

364. Prioneris elementhe (Doubl.), Ann. Nat. Hist., xvii., p. 23 (1846).

Common.

Genus Delias, Hübn.

365. Delias ithiela (Butler), Ann. Nat. Hist. (4), iv., p. 542 (1869).

366. Delias descombesii (Boisd.), Sp. Gén., i., p. 465 (1836).

Several examples.

367. Delias agostina (Hew.), Ex. Butt., i., Pier., pl. 1, f. 1, 2 (1852).

Very common.

368. Delias hierte, Hüb., Zutr. Ex. Schm., f. 77, 78 (1818).

369. Delias passithoë (Linn.), Syst. Nat., i., 2, 755 (1767). Cherra Punji. One pair.

Genus Eronia, Boisd.

370. Eronia avatar, Moore, Cat. Lep. E. I. C., i., p. 61, pl. 2 a, f. 1 (1857).

Subfamily PAPILIONINÆ.

Genus Ornithoptera, Boisd.

371. Ornithoptera rhadamanthus, Boisd., Sp. Gen., i., p. 180 (1836).

Many examples.

372. Ornithoptera cerberus (Felder), Reise, Nov. Lep., i., p. 19 (1865).

Common.

Genus Teinopalpus, Hope.

373. Teinopalpus imperialis, Hope, Trans. Linn. Soc., xix., p. 131, pl. 11, f. 1, 2 (1843).

Shillong and Cherra Punji.

Apparently a common insect in the Khasias. This butterfly for years in India went under the name of the Senechal Papilio, because it seemed to be confined to the Senechal Hill at Darjeeling, and the males may be observed flying from there across the opening to the hill opposite; the females used to be very scarce, and at one time for eight consecutive years there was no record of a female being taken, and I gave that excellent collector, Mr. Paul Möwis, of Darjeeling, fifty rupees for the first taken at the end of these eight years; in the Khasia Hills Mr. Hamilton's collectors seem to have hit upon the home of these females, and he has obtained a good number of recent years, of which he has sent me about forty.

Genus Achillides, Hübn.

374. Achillides arcturus (Westw.), Ann. Nat. Hist., ix., p. 37 (1842).

TRANS. ENT. SOC. LOND. 1893.—PART III. (SEPT.) Y

375. Achillides paris (Linn.), Mus. Ulr., p. 184 (1764).

Genus Sarbaria, Moore.

376. Sarbaria ganesa (Doubl.), Gray, Zool. Misc., p. 73 (1842).

Genus Sainia, Moore.

977. Sainia protenor (Cram.), Pap. Exot., i., pl. 49, f. A, B (1779).

378. Sainia rhetenor (Westw.), Arcana, Ent., i., pl. 16, f. 1 (1842).

A good number of both sexes.

Genus Pangerana, Moore.

379. Pangerana varuna (White), Entom., i., p. 280 (1842).

Genus Iliades, Hübn.

380. Iliades agenor (Linn.), Mus. Ulr., p. 494 (1764).

Papilio androgeos, Cram., Pap. Exot., 1, pl. 91, f. A, B (1779).

Papilio achates (Cram.), l. c., ii., pl. 182, f. A, B.

Apparently very common in all its varieties; some of the tailed females have the elongated white spots on the hind wings reduced to two or three thin streaks, and some of the tailless specimens have white patches near the anal angle of the hind wings, covering one-third of the wing-space.

Genus Byasa, Moore.

381. Byasa philoxenus (Gray), Zool. Misc., p. 32 (1831).

382. Byasa dasarada (Moore), Cat. Lep. E. I. C., i., p. 195 (1857).

383. Byasa bootes (Westw.), Ann. Nat. Hist., ix., p. 36 (1842).

Shillong and Cherra Punji. Eleven males, one female.

Genus Charus, Moore.

384. Charus helenus (Linn.), Mus. Ulr., p. 185 (1764).

Apparently a rare species in the Khasias; two examples from Shillong only received.

385. Charus chaon (Westw.), Arcana, Ent., ii., pl. 72, f. 1, 1\* (1845).

Common.

Genus Menelaides, Hübn.

386. Menelaides aristolochæ (Fabr.), Ent. Syst., p. 443 (1775).

Genus Laertias, Hübn.

387. Laertias polytes (Linn.), Mus. Ulr., p. 186 (1764).

Genus Meandrusa, Moore.

388. *Meandrusa evan* (Doubl.), Ann. Nat. Hist., xvi., pp. 235—304 (1845).

Many males, and thirteen females.

Genus Dabasa, Moore.

389. Dabasa gyas (Westw.), Arcana, Ent., i., pl. 11, f. 1 (1841).

Many males, and seventeen females.

Genus Pazala, Moore.

390. Pazala glycerion (Gray), Zool. Misc., p. 32 (1831). Fifteen males from Shillong.

Genus Pathysa, Reakirt.

391. Pathysa agetes (Westw.), Arcana, Ent., ii., pl. 55, f. 1, 2 (1853).

Several hundreds, all males; the females of this *Papilio* must be very rare; I have never seen one.

392. Pathysa antiphates (Cram.), Pap. Exot., i., pl. 72, f. A, B (1779).

Common.

393. Pathysa anticrates (Doubl.), Ann. Nat. Hist., xviii., p. 371 (1846).

In great numbers. The closely allied and widespread form *P. nomius* I have never received from the Khasias; it is, no doubt, more or less a southern form, but I have several examples from Anadra, at the foot of Mount Aboo, which is much further north than the Khasia Hills, and one would have expected to get it from the latter locality also.

Genus Dalchina, Moore.

- 394. Dalchina cloanthus (Westw.), Arcana Ent., i., pl. 11, f. 2 (1841).
- 395. Dalehina sarpedon (Linn.), Mus. Ulr., p. 196 (1764). Genus Zetides, Hübn.
- 396. Zetides eurypylus (Linn), Mus. Ulr., p. 216 (1764). Several examples.
- 397. Zetides bathyeles (Zinck.), Nova Acta Nat. Cur., xv., p. 157, pl. 14, f. 6, 7 (1831).

  Many examples.
- 398. Zetides axion (Felder), Verh. zool.-bot. Ges., xiv., p. 305 (1864).

  Five males.
- 399. Zetides agamemnon (Linn.), Mus. Ulr., p. 202 (1764).

Genus Opheides, Hübn.

400. Opheides erithonius (Cram.), Pap. Exot., iii., pl. 232, f. A, B (1782).

Genus Chilasa, Moore.

- 401. Chilasa dissimilis (Linn.), Mus. Ulr., p. 301 (1764).
- 402. Chilasa panope (Linn.), Syst. Nat., i. (2), p. 782 (1767).

Genus Isamiopsis, Moore.

403. Isamiopsis telearchus (Hew.), Trans. Ent. Soc., 1852, p. 22, pl. 6, f. 3.

Eleven males and one female.

The female, which is now, I believe, in the collection of Messrs. Godman and Salvin, did not differ from the other sex; it certainly had no resemblance to the insect described and figured by de Nicéville in Journ. Bo. Nat. Hist. Soc., 1889, p. 169, pl. A, f. 5.

404. Isamiopsis slateri (Hew.), Ex. Butt., ii., Pap., pl. 4 (text), (1859).

Five males and one female.

405. Isamiopsis danisepa (Butler), Ann. Mag. N. H. (5), xvi., p. 343 (1885).

Cherra Punji. One male.

# Genus Tamera, Moore.

406. Tamera castor (Westw.), Ann. Nat. Hist., ix., p. 37 (1842).

# Genus Cadugoides, Moore.

- 407. Cadugoides agestor (Gray), Zool. Misc., p. 32 (1831).
- 408. Cadugoides epycides (Hew.), Ex. Butt., ii., Pap., pl. 6, f. 16 (1864).

# Genus Paranticopsis, Wood-Mason.

- 409. Paranticopsis xenocles (Doubl.), Gray, Zool. Misc., p. 74 (1842).
- 410. Paranticopsis maearcus (Godt.), Enc. Méth., ix., p. 76 (1819).
- 411. Paranticopsis megarus (Westw.), Arcana Ent., ii., pl. 72, f. 2 (1845).

#### Genus Leptocircus, Swains.

412. Leptocircus curius (Fabr.), Mant. Ins., ii., p. 9 (1787).

# Family HESPERIDÆ. Subfamily HESPERIINÆ.

Genus Calliana, Moore.

413. Calliana pieridoides, &, Moore, P. Z. S., 1878, p. 687, pl. 45, f. 2; \$, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vi., p. 377, pl. 6, f. 25 (1891).

Several males and one female from Shillong.

# Genus Capila, Moore.

**414.** Capila jayadeva (Moore), Cat. Lep. E. I. C., i., p. 248 (1857).

Capila jayadeva, Moore, P. Z. S., 1865, p. 785, pl. 42, f. 3.

Four males and two females from Shillong and Cherra Punji.

Watson, in his classification of the Hesperidæ, P. Z. S., 1893, p. 31, states that the neuration of the genus Pisola is the same as Calliana, from which it only differs in having no tuft on the hind tibiæ in the male; de Nicéville, on the other hand (Journ. Bo. Nat. Hist. Soc. (3), vii., p. 347 (1892)), says that it has this tuft of hairs, and for want of this knowledge Moore has mixed Pisola zennara and Capila jayadera together. Though I feel

obliged to protest against the aggressive tone adopted by de Nicéville in this, as on almost all occasions when criticising the work of his contemporaries, I am bound to admit the general correctness of his conclusions. It is a pity he does not say upon the examination of how many specimens of both sexes of both species he grounds his conclusions; in my own collection are several undoubted males of Capila jayadeva, Moore, a specimen corresponding to Moore's description of the female, but which has the tuft of hairs on the hind tibie; the abdomen is broken, but the specimen is undoubtedly that of a male. But again I have a specimen corresponding to Moore's description of Pisola zennara, which I believe is a male; though an old example, it is complete, and I have often thought that instead of two Indian species in these two genera there are three.

Genus Crossiura, de Nicé., Journ. Bo. Nat. Hist. Soc., 1892, p. 350.

415. Crossiura pennicillatum, de Nicé., l.c., p. 351, pl. s, f. 1 3, 2 9.

Shillong. Two males.

Genus Satarupa, Moore.

416. Satarupa sambara (Moore), Cat. Lep. E. I. C., i., p. 246 (1857).

Very common.

Genus Daimio, Murray.

417. Daimio bhagava (Moore), P.Z. S., 1865, p. 781. Many examples.

418. Daimio phisara (Moore), Journ. As. Soc. Beng., 1884, p. 50.

Shillong. Two examples.

The above two are very doubtfully distinct species.

419. Daimio narada (Moore), l. c., p. 51. Many examples.

Genus Sarangesa, Moore.

420. Sarangesa dasahara (Moore), P. Z. S., 1865, p. 787. Shillong. Four examples.

A widely spread species; I have it from Sikkim, Rangoon, and South Kanara.

Genus Coladenia, Moore.

421. Coladenia fatih (Kollar), Hüg. Kasch., iv. (1), p. 454, pl. 18, f. 5, 6 (1848).

Fifteen examples.

Genus Achalara, Scudder; Lobocla, Moore.

422. Achalara liliana (Atkinson), P. Z. S., 1871, p. 216, pl. 12, f. 2.

Common.

Genus Celænorrhinus, Hübn.

423. Celænorrhinus badia (Hew.), Ann. Mag. N. H. (4), xx., p. 322 (1877).

One example.

424. Celanorrhinus chamunda (Moore), P. Z. S., 1865, p. 788.

Shillong. Two examples.

425. Celænorrhinus leucocera (Kollar), Hüg. Kasch., iv. (1), p. 454, pl. 18, f. 3, 4 \(\gamma\) (1848).

Many examples.

426. Celænorrhinus putra (Moore), l. c.

Several examples.

Differs from leucocera in the absence of the small white streak close to the costa on the upper side of the broad macular discal band; the large white spots are closer together, and more evenly placed, and the fore wing is slightly narrower and more produced.

427. Celænorrhinus aurivittata (Moore), P. Z. S., 1878, p. 843, pl. 53, f. 2.

Three examples from Cherra Punji.

428. Celænorrhinus pyrrha, de Nicé., Journ. Bo. Nat. Hist. Soc., iv., p. 181, pl. B, f. 11 \( \chi \) (1889).

Recorded from the Khasias; not received by me.

429. Celænorrhinus nigricans (de Nicé.), Journ. As. Soc. Beng., liv. (2), p. 123, pl. 2, f. 6 \( \) (1885).

Shillong. Two examples. This species appears to have been omitted by Watson in his classification.

Genus Odina, Mabille.

430. Odina decoratus (Hew.), Desc. Hesp., p. 17 (1867). One example from Shillong.

Genus Tagiades, Hübn.

431. Tagiades ravi (Moore), Cat. Lep. E. I. C., i., p. 246 (1857).

Tagiades kasiana, Moore, Journ. As. Soc. Beng., 1884, p. 51.

Many examples.

Watson keeps these distinct, but I cannot see by what character they can be separated. Moore's type of ravi came from Penang; his kasiana is said to be paler, and the under side of the hind wing more intensely grey; the spots above smaller. I have before me eleven males, five females, from the Khasias; one male, three females, from the Andamans; two males, one female, from Orissa; one male, two females, from Rangoon. The Andaman specimens have the white on the under side of hind wings most restricted; the others are about equal in that respect. The size of the spots above in all of them vary; the Orissa and Rangoon examples are much the palest; one very pale female from the Khasias, the rest quite as dark as any of the others; one female from the Khasias with no subapical spots.

432. Tagiades atticus (Fabr.), Ent. Syst., iii., i., p. 339 (1793).

Goniloba menaka, Moore, Cat. Lep. E. I. C., i., p. 246 (1857).

Very common.

- 433. Tagiades gana (Moore), P. Z. S., 1865, p. 180. One example.
- 434. Tagiades pralaya (Moore), Cat. Lep. E. I. C., i., p. 246 (1857).

  Several examples.

Genus Darpa, Moore.

435. Darpa hanria, Moore, P. Z. S., 1865, p. 781, pl. 42, f. 2.

One example from Shillong.

Genus Ctenoptilum, de Nicé.

436. Ctenoptilum vasava (Moore), P. Z. S., 1865, p. 786. Many examples.

Genus Odontoptilum, de Nicé.

437. Odontoptilum angulata (Felder), Verh. zool.-bot. Ges., xii., p. 488 (1862).

Achlyodes sura, Moore, P. Z. S., 1865, p. 786. Many examples.

Genus Caprona, Wallengren; Abaratha, Moore.

438. Caprona ransonnetii (Felder), Verz. zool.-bot. Ges. Wien., 1868, p. 284.

One example from Shillong.

Genus Pyrgus, Hübn.

439. Pyrgus galba (Fabr.), Ent. Syst., iii., i., 352, 337 (1793).

Shillong. One example.

Watson makes this genus Section C of the genus Hesperia, but as Hesperia has a tuft of hairs on the hind tibiæ and Pyrgus has not got this subgeneric character, I do not see why Hübner's name should be sunk.

Subfamily PAMPHILINÆ. Genus Iambrix, Watson.

440. Iambrix salsala, Moore, P. Z. S., 1865, p. 786. Shillong. Two males and one female.

Genus Aeromachus, de Nicé.

441. Aeromachus stigmata (Moore), P. Z. S., 1878, p. 694. Very common.

442. Aeromachus jhora (de Nicé.), Journ. As. Soc. Beng., 1885, p. 122, pl. 2, f. 12  $\mathfrak F$ .

Shillong. One example.

Genus Sebastonyma, Watson.

443. Sebastonyma dolopia (Hew.), Desc. Hesp., p. 27 (1868). Many examples.

Genus Arnetta, Watson.
444. Arnetta atkinsoni (Moore), P. Z. S., 1878, p. 693, pl. 45, f. 10.

Shillong. Two examples.

445. Arnetta khasiana (Moore), P. Z. S., 1878, p. 693. Common.

Genus Isma, Distant.

446. Isma isota, n. sp.

3. Allied to I. ccphala, Hew., and I. ccphaloidcs, de Nicé. Above it differs from I. ccphala in having only two subapical white spots instead of three, the top one being absent; the discal spots similar, but smaller, the lowest one near the hinder margin being merely a white point; the two discal spots on the hind wing are also smaller, and consequently wider apart. On the under side the fore wings have similarly disposed spots; the outermost spot near the outer margin a mere white point, and no indication of the white spot near the hinder margin; the ground colour of the wing is of a uniform blackish brown, with the costal and apical areas broadly yellowish; the hind wing is of a uniform yellowish throughout, with the spots as above, the spot nearest the hinder margin not bifid, i.e., divided by the vein, as in cephala. Expanse of wings,  $1\frac{1}{10}$  in.

Shillong. One example.

I at first put it with *cephala*, not liking to describe a unique specimen; but it is so clearly distinct either from *cephala* or from de Nicéville's description of *cephaloides*, that it is worth describing.

Genus Zographetus, Watson.

447. Zographetus satwa, de Nicé., Journ. As. Soc. Beng., 1883, p. 86.

Common.

Genus Metapa, Moore.

448. Metapa aria (Moore), P. Z. S., 1865, p. 784. Common.

442. Metapa sasivarna (Moore), l.c.

Common.

449. Metapa shalgrama, de Nicé., Journ. As. Soc. Beng., 1883, p. 85.

Shillong. Three males. I have this from the Karen Hills, and one example received recently from Port Blair, Andaman Islands, received from Mr. Wimberley, which is also identical with the Karen Hills example identified by de Nicéville.

Genus Erionota, Mab.

450. Erionota thrax (Linn.), Syst. Nat., i., 2, p. 794 (1767).

Several examples.

451. Erionota acrolenca (Wood-Mason & de Nicé.), Proc. As. Soc. Beng., Aug., 1881, p. 143.

Hesperia hiraca, Moore, Trans. Ent. Soc. Lond., 1881, p. 313, \(\gamma\).

Teligonus lara, Swinhoe, Ann. Mag. N. H., 1890, p. 365.

Shillong. Two examples. I have this insect from the Andamans, the Nikobars, Makasser, Celebes, and from Nias, and am inclined to believe there is more than one species; the Celebes insect is, however, identical with those from the Khasias.

Genus Gangara, Moore.

452. Gangara thyrsis (Fabr.), Syst. Ent., p. 532 (1775). Shillong. One example.

Genus Padraona, Moore.

453. Padraona dara (Kollar), Hüg. Kasch., iv., p. 455 (1844).

Pamphila mæsa, Moore, P. Z. S., 1865, p. 509, pl. 30, f. 9.

Several examples.

Genus Telicota, Moore.

454. Telicota bambusæ (Moore), P. Z. S., 1878, p. 691, pl. 45, f. 11, 12, 3 ?.

Four males and five females from Shillong.

455. Telicota siva (Moore), P. Z. S., 1878, p. 692.

Very common.

Watson has omitted this common species in his classification; I only put it here provisionally; he has also omitted the allied form *T. brahma*, Moore, P. Z. S., 1878, p. 691.

Genus Chapra, Moore.

456. Chapra mathias (Fabr.), Ent. Syst., Suppl., p. 433 (1798).

Four examples.

457. Chapra agna (Moore), P. Z. S., 1865, p. 791. Two examples from Shillong.

458. Chapra prominens, Moore, P. Z. S., 1882, p. 261. Common.

Genus Parnara, Moore.

459. Parnara bada (Moore), P. Z. S., 1878, p. 688. Several examples.

460. Parnara guttata (Bremer & Gray), Schm. N. Chinas, p. 10 (1853).

Pamphila mangala, Moore, P. Z. S., 1865, p. 792. Four examples from Shillong.

Genus Baoris, Moore.

461. Baoris unicolor, Moore, P. Z. S., 1883, p. 533. One example.

462. Baoris sikkima, Swinhoe, Ann. Mag. N. H., 1890, p. 362.

Many examples of both sexes.

Why de Nicéville and Watson should insist upon clubbing all the different Indian species of this genus into one under the name of Hewitson's Philippine type occia, it is difficult to understand, when they give specific rank to the numerous forms of Parnara recently described by the former; occia, sikkima, scopulifera, and unicolor differ far more widely from each other than do the species of Parnara referred to, and are every bit as constant in their specific characters. Hewitson described a Philippine insect as occia, and subsequently put every Indian Hesperid in his collection with the long brush of hairs on the upper side of the hind wing over his Philippine insect. Hewitson did the same thing with many others of his species,—witness Halpe beturia, as pointed out by Watson, P. Z. S., 1893, p. 110,—but it does not make them all one species. I have now before me seventeen examples of sikkima, being five males, two females, from Sikkim, six males, four females, from the Khasias, all identical with the type-specimens; three males and one female unicolor, one from the Khasias, the others from Sikkim, all identical with the type; five males, one female scopulifera, all from the Andamans, and all identical with the type. I have examined many others in other collections; sometimes one or another of the minute hyaline spots are absent, but in so far as the general characters are concerned, by which these species have been very properly separated, I have seen no intermediates.

# Genus Caltoris, nov.

Differs from *Baoris* in the male being without the sexual tuft of long hairs on the upper side of the hind wing, attached along the upper margin of the cell, and directed downwards across the cell.

- 463. Caltoris kumara (Moore), P. Z. S., 1878, p. 687. Three examples from Shillong.
- 464. Caltoris austeni (Moore), P. Z. S., 1883, p. 533. Common; I have received many specimens.
- 465. Caltoris assamensis (Wood-Mason & de Nicé.), Journ. As. Soc. Beng., 1882, p. 65.

Very common. This species varies much in size.

466. Caltoris pagana (de Nicé.), P. Z. S., 1887, p. 465, pl. 40, f. 7 3.

Many examples.

- 467. Caltoris onchisa, n. sp.
- $\Im$  Q. Brown. Fore wing with two spots at end of cell, one above the other, and a whorl of five spots, commencing with a largish one near the base of the first median interspace; in the female there is another small spot above, but attached to the submedian vein a little beyond the middle. Hind wings without markings; cilia testaceous, with a brown base; outer portions white on hind wings, except at apex. Under side brown, with a reddish hue; colour uniformly dark throughout; spots as above, except that the male has the spot on the submedian vein of fore wings, and the female has a large suffused patch which fills the interspace. Both sexes with a peculiar pale outwardly curved subapical fascia on fore wings. Expanse of wings,  $\Im$ ,  $1^6_{10}$  in.,  $\Im$ ,  $1^6_{10}$  in.

One pair. Shillong.

Near C. farri, Moore, but quite distinct; the pale subapical fascia on hind wings below is very distinctive.

- 468. Caltoris toona (Moore), P. Z. S., 1878, p. 689. Many examples.
- 469. Caltoris eltola (Hew.), Ex. Butt., iv., Hesp., pl. 4, f. 40 (1869).

  Very common.
- 470. Caltoris colaca (Moore), P. Z. S., 1877, p. 594, pl. 58, f. 7.

Two examples from Shillong.

- 471. Caltoris bevani (Moore), P. Z. S., 1878, p. 688. Five examples. Shillong.
- 472. Caltoris plebeia (de Nicé.), P. Z. S., 1887, p. 466, pl. 40, f. 2 &.
  Two examples. Shillong.
- 473. Caltoris tulsi (de Nicé.), Journ. As. Soc. Beng., liii. (2), p. 86, pl. 10, f. 1 & (1883).

  Two males and one female. Shillong.
- 474. Caltoris sarala (de Nicé.), Journ. Bo. Nat. Hist. Soc., 1889, p. 173, pl. B, f. 6 \(\gamma\). One male. Shillong.
- 475. Caltoris parca (de Nicé.), l. c., p. 174, pl. B, f. 10 ? . Recorded from the Khasias; not received by me.

Genus Halpe, Moore.

476. *Halpe moorei*, Watson, P. Z. S., 1893, p. 109. Common.

This insect, as pointed out by Mr. Watson, has heretofore been in Indian collections as *H. beturia*, Hew., because Hewitson put an Indian insect in his collection with his Celebes type over the name beturia. Moorei is a very widely-spread Indian species. I have it from Sikkim, Andamans, Calcutta, Madras, Bombay, Bangalore, North Kanara, and the Khasias.

477. Halpe homolea (Hew.), Descr. Hep., p. 29 (1868). Halpe sikkima, Moore, P. Z. S., 1882, p. 407.

Many examples; corresponding in all respects with Sikkim specimens. In the Sikkim, as well as the

Khasia examples, the variation referred to by Elwes, Trans. Ent. Soc. Lond., 1888, p. 453, is observable, the cell-spot in the fore wings above being sometimes absent, and sometimes there is a small white dot above the two subapical spots; and in some specimens the cell-spot is reduced to a dot, but the discal elongated spots and the two usual subapical spots do not seem to vary in size.

# 478. Halpe aucma, n. sp.

3. Closely allied to the preceding; of the same uniform brown colour above; fore wings with no cell-spot, two discal spots less than half the size of these spots in H. homolea, the lower the larger, and slightly excavated on the outer side, as obliquely placed as in H. gupta, de Nicé.; three subapical spots, the uppermost one very minute. Hind wings uniformly coloured, not paler in the centre, as in homolea; cilia grey, patched with brown in the fore wings. Under side darker than in homolea; spots of fore wings as above; otherwise the markings of both wings are of the same character as in homolea, but more suffused and less distinct. Expanse of wings,  $1\frac{4}{10}$  in.

One example. Shillong.

# 479. Halpe marta, n. sp.

J. Closely allied to homolea, similarly coloured, but without the paler shade in centre of hind wings. Fore wings shorter; discal spots much shorter, the bottom one nearly square, slightly excavated on the outer side, not nearly so obliquely placed, consequently the cell-spot, which is present and small, is not above its inner end, but well to the inner side of the wing; subapical spots two, and nearly of equal size, as in homolea; cilia similar. Under side darker; spots on fore wing as above. Wings with similar markings, but not nearly so diffused with yellow atoms, and the markings on hind wings very obscure. Expanse of wings, 14 in.

One example. Shillong.

# 480. Halpe wantona, n. sp.

3. Allied to homolea. Wings similarly coloured, with the paler space in the centre of hind wings; discal and cell-spots as in marta; subapical spots all very small, the upper one very minute; cilia of fore wings not patched either above or below, but brown with pale tips, palest towards hinder angle; cilia of hind wings grey. Under side: fore wings with spots as above, the usual subapical band of yellow spots slightly recurved and not uniform; otherwise the general coloration and markings much as in homolea,

but the markings on the hind wings are very obscure. Expanse of wings,  $1\frac{3}{10}$  in.

Shillong. One example.

# 481. Halpe perara, n. sp.

3. Dark brown; cell-spots minute; discal spots two, also very small, placed somewhat as in H. sitala, de Nicé., the lower spot excavated on its outer side; in the type-specimen the lower spot is the smaller, in the other specimen it is slightly the larger; subapical spots two, small, nearly round, the lower slightly the larger. Hind wings unmarked; cilia of both wings grey, with brown patches. Under side dark brown, slightly paler than on the upper side. Fore wings with spots as above; a slight indication of a third upper subapical spot; a submarginal yellowish grey indistinct band of suffused spots extending below the middle. Hind wings with slight suffusion of yellowish atoms, which form two indistinct incomplete bands, the first broad and before the middle, the second discal, and composed of small indistinct spots; palpi beneath, face and pectus covered with yellowish grey hairs; abdomen with fine transverse grey bands. Expanse of wings, 14 in.

Shillong. Two examples.

This insect above looks somewhat like *Halpe ceylonica*, Moore; below it is more of the *homolea* character.

# 482. Halpe teliga, n. sp.

3. Allied to H. moorei, Watson. Upper side dark brown. Hind wings paler in the centre. Fore wings with two spots in the cell, one above the other, and conjoined, the upper the smaller; discal spots two, slightly larger than the cell-spots, the upper the smaller, both excavated on the outer side, the spots larger than in moorei, but similarly placed; subapical spots three, minute, and of equal size. Hind wings unmarked; cilia of both wings grey, Under side pale chocolate-brown. with brown patches. wings with the markings much as in moorei. Hind wings with some whitish subcostal marks; a white discal band divided by the veins, as in moorei, but broader than is usual in that species, and just below this band, and nearly touching it, is another band of four round pure white spots, and between this and the margin are two bands of larger brown spots, the inner one edged outwardly with whitish, the other one touching the whitish marginal edge: palpi beneath and thorax with yellowish grey hairs; abdomen white, with two longitudinal rows of brown spots. Expanse of wings,  $1\frac{4}{10}$  in.

Shillong. One example.

The under side of this species is very distinctive, with its pretty chocolate marbled appearance.

483. Halpe cerata (Hew.), Ent. Mo. Mag., 1876, p. 152. Shillong. Many examples. The white markings below are more pronounced in Khasia Hill examples than in those from Sikkim, the spots being larger.

484. *Halpe gupta*, de Nicé., Journ. As. Soc. Beng., 1886, p. 255, pl. 11, f. 1 3.

Shillong. Many examples.

485. Halpe zema (Hew.), Ann. Mag. N. H. (4), xix., p. 77 (1877).

Shillong and Cherra Punji. Many examples.

486. *Halpe hyrie*, de Nicé., Journ. Bo. Nat. Hist. Soc. (3), vi., p. 388, pl. a, f. 34 (1891).

Shillong. One example.

487. Halpe aina, de Nicé., l. c. (3), iv., р. 176, pl. в, f. 8 & (1889).

Shillong. One example.

Genus Notocrypta, de Nicé.

488. Notocrypta restricta (Moore), Lep. Ceylon, i., p. 178 (1881).

Shillong and Cherra Punji. Many examples. A widely distributed species. I have it from many Indian localities, including the Andamans, where it appears to be commoner than the local form paralysos of Wood-Mason and de Nicéville, which is also omitted by Watson in his classification. I have several examples of paralysos, received from Wimberley, identical with a specimen named for me by de Nicéville; they appear to me to be identical with feisthamelii, Boisd. = alysos, Moore.

Genus Udaspes, Moore.

489. *Udaspes folus* (Cram.), Pap. Exot., i., pl. 74, f. 7 (1779).

Common.

Genus Astictopterus, Felder.

490. Astietopterus olivascens, Moore, P. Z. S., 1878, p. 692. Several examples.

TRANS. ENT. SOC. LOND. 1893.—PART III. (SEPT.)

491. Astietopterus kada, n. sp.

3 9. Upper side of a uniform dark brown, with a pinkish tinge; cilia of both wings paler pinkish brown. Fore wings with three subapical white spots, the middle spot generally the largest; in some examples the upper spot is very minute, in others it is nearly as large as the lowest spot; no other markings above. Under side pinkish brown. Fore wings suffused with dark brown, except in the upper half of the outer marginal space; subapical spots as above. Hind wings much paler pinkish brown; costal space suffused with brown; an indistinct irregular brown band before the middle, another broader and more complete discal. Expanse of wings, 3 140, 4 140 170 in.

Shillong. Five males and five females.

Allied to A. olivascens, Moore, but the three prominent subapical white spots of fore wings, and the peculiar pale pinkish brown colour of the hind wings below, are very distinctive.

Genus Koruthailos, Watson.

492. Koruthailos butleri (Wood-Mason and de Nicé.), Journ. As. Soc. Beng., liii. (2), p. 98, pl. 10, f. 3 & (1883).

Shillong. One example.

Genus Kerana, Distant.

493. Kerana diocles (Moore), P. Z. S., 1865, p. 787. Several examples. Shillong and Cherra Punji.

Genus Pithauria, Moore.

- 494. Pithauria murdava (Moore), P. Z. S., 1865, p. 784. Common.
- 495. Pithauria stramineipennis, Wood-Mason and de Nicé., Journ. As. Soc. Beng., 1886, p. 388, pl. 15, f. 5 ♂.

Common.

Genus Unkana, Distant.

496. Unkana semamora (Moore), P. Z. S., 1865, p. 791. Shillong. One example. Though a male it has the opaque white spot in the submedian interspace, which de Nicéville says is a specific character by which his *U. watsoni* can be distinguished; it corresponds, however, in all other respects with Moore's type of semamora.

Genus Ismene, Swainson.

- 497. Ismene ataphus, Watson, P. Z. S., 1893, p. 126. Many examples. Shillong and Cherra Punji.
- 498. Ismene jaina, Moore, P. Z. S., 1865, p. 782. Shillong. Several examples.
- 499. Ismene amara, Moore, l. c., p. 783. Shillong. One male.

Genus Burara, nov.

Differs from the genus *Ismene* in the absence of any androconia patch or streaks on the fore wing of the male.

- 500. Burara vasutana (Moore), P. Z. S., 1865, p. 782. Common.
- 501. Burara harisa (Moore), l. c.
  Several examples. Shillong and Cherra Punji.
- 502. Burara gomata (Moore), l. c., p. 783  $\mathcal{F}$ . Shillong. One pair.

Genus Hasora, Moore.

- 503. Hasora badra (Moore), P. Z. S., 1865, p. 778. Several examples. Shillong and Cherra Punji.
- 504. Hasora anura, de Nicé., Journ. Bo. Nat. Hist. Soc., iv., p. 170, pl. B, f. 5 &, 1 \cong (1889). Snillong. Several examples.

Shillong. Several examples. The type of this species came from Sarawak; it is a common Indian species. I have both sexes from Sikkim, several places near Bombay, and the Khasias identical with my Bornean examples, and with the Sarawak type in the B. M. It has been mixed up in Indian collections with the commoner Indian Parata alexis, Fabr., but can easily be distinguished by the subapical white spot on upper side of fore wings, and the entire absence of the very characteristic subgeneric sexual character of Parata, i. e., an oblique glandular streak of laxly raised scales below the cell in the fore wings above.

Genus Parata, Moore.

506. Parata chromus (Cram.), Pap. Exot., iii., pl. 284, f. E 3 (1782).

Two males. Shillong.

507. Parata alexis (Fabr.), Syst. Ent., p. 533 (1775). Very common.

Genus Bibasis, Moore.

508. Bibasis sena (Moore), P. Z. S., 1865, p. 778. Common.

Genus Badamia, Moore.

509. Badamia exclamationis (Fabr.), Syst. Ent., p. 530 (1775).

Common.

Genus Rhopalocampta, Wallengren: Choaspes, Moore.

510. Rhopalocampta benjamini (Guérin), Deless. Souv. Voy. Ind , ii., p. 79, pl. 22, f. 2, 2 A (1843). Several examples. Shillong and Cherra Punji.

Note.—Watson states, P. Z. S., 1893, p. 90, that the genus Cyclopides is confined to Africa, but he unfortunately does not state where the common Indian insect Cyclopides subvittatus, Moore, P. Z. S., 1878, p. 692 = subradiatus, Moore, p. 693, should be placed.

The types of all the new species will as usual be pre-

sented to the British Museum.

PS.—Since the printing of the earlier sheets of this paper, I have determined another species of the genus *Euthalia*, which is quite new to English collections.

Euthalia duda, Staud., Ex. Schm., 1886, p. 152, pl. 53. Shillong. One male.